

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service
Commission held in the City of
Albany on January 23, 2002

COMMISSIONERS PRESENT:

Maureen O. Helmer, Chairman
Thomas J. Dunleavy
James D. Bennett
Leonard A. Weiss
Neal N. Galvin

CASE 98-C-1357 - Proceeding on Motion of the Commission to
Examine New York Telephone Company's Rates for
Unbundled Network Elements.

ORDER ON UNBUNDLED NETWORK ELEMENT RATES

(Issued and Effective January 28, 2002)

BY THE COMMISSION:

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION AND PROCEDURAL HISTORY	1
LEGAL CONTEXT; THE STATUS OF TELRIC	8
OVERVIEW OF COST STUDIES, RECOMMENDED DECISION, AND EXCEPTIONS	14
Cost Studies and Recommended Decision	14
Verizon's Exceptions	15
CLECs' and Other Parties' Exceptions	17
BURDEN OF PROOF	17

TABLE OF CONTENTS

	<u>Page</u>
SWITCHING COSTS	20
Introduction	20
Material Investment	20
1. Background and Recommended Decision	20
2. Estimating a Discount	24
3. Surrogate Calculation	29
EF&I Factor	32
Switching Cost Allocation and Rate Design	34
1. Usage - and Non-Usage- Sensitive Costs	34
2. Calculation of Usage Sensitive Rates	36
a. Minutes of Use	36
b. Time-of-Day Rates	39
Port Additives	40
Tandem Switching	41
Refunds	42
INVESTMENT LOADINGS	47
Land and Building Investment Loading Factor	48
Calculation of the L&B Factor	51
ANNUAL COST FACTORS	51
Introduction	51
Productivity	53
1. In General	53
2. Copper Distribution Facilities	56

TABLE OF CONTENTS

	<u>Page</u>
Forward-Looking-to-Current Factor	56
Removal of Retail Avoided Costs	62
ACF Versus CCF	65
Network ACF	66
Wholesale Marketing ACF	69
Common Overhead ACF	71
1. Common Overhead Expenses	71
2. Special Pension Enhancement Expense	72
3. Merger Savings	75
Depreciation ACF	76
COST OF CAPITAL	79
Introduction	79
The Recommended Decision	80
Exceptions	83
1. Verizon	83
2. AT&T	85
Discussion and Conclusion	86
LOOP COSTS	87
Introduction and Overall Method	87
Network Design and Loop Configuration	90
1. Concentration Ratio	91
2. Integrated v. Universal DLC	93
Demand Forecast and Utilization Factors	96

TABLE OF CONTENTS

	<u>Page</u>
1. Demand Forecast	96
2. Distribution Fill Factor	98
3. Other Utilization Factors	101
a. Remote Terminal Electronics	101
b. R.T. Enclosures and COTs	103
Environmental Factor	105
Link Cost Calculator	111
Dark Fiber	114
House and Riser Cable	116
1. House and Riser Fill Factor	116
2. Asset Inquiry Charge	118
Loop Rate Deaveraging	119
INTEROFFICE TRANSPORT	122
Ports Per Node	122
Optional Digital Cross-Connect System	124
Fill Factors	125
IOF Deaveraging	127
DSL COMPATIBLE LOOPS AND LINE SHARING	128
Introduction	128
Copper Versus Fiber	129
Loop Qualification Charge	130
Splitter Administration and Support Charge	133
Line Sharing SAC Charges	137

TABLE OF CONTENTS

	<u>Page</u>
Cooperative Testing	137
NONRECURRING CHARGES	139
Introduction	139
The Studies in General	141
OSS Efficiency (Fallout Rate)	141
Loop Conditioning NRCs	143
DUCTS AND CONDUITS	146
Introduction, Background, and Legal Context	146
Historical vs. Forward-Looking Costs	149
Use of CPR Data Rather Than ARMIS	155
Half-Duct Presumption	158
OTHER ISSUES	160
UCRCC	160
OS/DA Rate	161
ORDERING CLAUSES	161
APPENDICES	

INTRODUCTION AND PROCEDURAL HISTORY

In September 1998, we announced our intention to undertake, beginning in January 1999, a comprehensive reexamination of the unbundled network element (UNE) rates of Verizon New York Inc. f/k/a Bell Atlantic-New York,¹ as set in the First Network Elements Proceeding. (That case is referred to as "the First Elements Proceeding" or, simply, "the First Proceeding.")² This ensuing case has had a long and complex procedural history, including various interim measures and extensions of deadlines in response to pertinent federal court decisions and a delay of several months in the aftermath of the September 11 attack on New York and of settlement efforts described below. Only the broad outlines of that history will be recounted here.

On the basis of an initial collaborative process facilitated by Department of Public Service Staff, the proceeding was divided into three modules: Directory Database (DDB); Collocation; and Unbundled Network Elements (UNEs) generally.³ The first two modules culminated in decisions issued

¹ Cases 95-C-0657 et al., First Network Elements Proceeding, Order Denying Motion to Reopen Phase 1 and Instituting New Proceeding (issued September 30, 1998). Except where clarity otherwise requires, Verizon is referred to as such throughout this order, even in references to matters that predate the name.

² The First Elements Proceeding comprised four phases, designated "Resale" and Phases 1, 2, and 3, as follows. Resale: Opinion No. 96-30 (issued November 27, 1996). Phase 1 (network elements generally): Opinion No. 97-2 (issued April 1, 1997); rehearing, Opinion No. 97-14 (issued September 22, 1997). Phase 2 (primarily Operations Support Systems and Nonrecurring Charges): Opinion No. 97-19 (issued December 22, 1997); rehearing, Opinion No. 98-13 (issued June 8, 1998). Phase 3 (various issues, including collocation): Opinion No. 99-4 (issued February 22, 1999); rehearing, Opinion No. 99-9 (issued July 26, 1999). The phases and their opinions are referred to as "Phase 1," "Phase 2 Rehearing Opinion," etc., without further specification.

³ Case 98-C-1357, Ruling on Scope and Schedule (issued June 10, 1999).

during the first half of last year.⁴ During the course of the proceeding, special expedited tracks were established for consideration of certain digital subscriber line (DSL) rates and line sharing rates; those, too, have been concluded.⁵ In several instances, issues raised in those earlier modules and tracks gave rise to matters considered further here.

Initial testimony in Module 3 was originally scheduled to be filed in December 1999, with hearings to begin in February 2000. For a variety of reasons, including the broad scope of the proceeding, the need to take account of actions by the FCC and of a federal court decision, and the strike by Verizon employees during August 2000, that schedule was extended on several occasions, and hearings were ultimately held in December 2000. The only one of these factors that warrants specific note here is the decision of the United States Court of Appeals for the Eighth Circuit to vacate 47 C.F.R. §51.505(b)(1), a portion of the FCC's rules central to the requirement that UNEs be costed and priced on the basis of Total Element Long-Run Incremental Cost (TELRIC).⁶ (That decision is now stayed pending Supreme Court review; these matters are discussed further in the next section.)

In view of the Eighth Circuit's ruling and the uncertainty it was said to create with regard to the proper costing standard, Verizon urged suspension of the proceeding. All other parties opposed any suspension; they questioned, among

⁴ Module 1 (DDB): Case 98-C-1357, Opinion No. 00-2 (issued February 8, 2000); Order on Petitions for Rehearing (issued June 29, 2000). Module 2 (Collocation): Case 98-C-1357, Opinion No. 00-8 (issued June 1, 2000); Order Denying Petitions for Rehearing of Opinion No. 00-08 (issued January 4, 2001).

⁵ DSL: Case 98-C-1357, Opinion No. 99-12 (issued December 17, 1999); Order Denying Petitions for Rehearing (March 17, 2000). Line Sharing: Case 98-C-1357, Opinion No. 00-7 (issued May 26, 2000); Order Denying Petition for Rehearing (issued October 3, 2000).

⁶ Iowa Utilities Bd. et al. v. FCC, 219 F.3d 744(8th Cir. 2000).

other things, the import of the court's decision in jurisdictions beyond the Eighth Circuit and argued (contrary to Verizon's view) that Verizon in any event remained bound to TELRIC pricing by conditions imposed by the FCC in approving the merger of its predecessor companies.⁷ Administrative Law Judge Joel A. Linsider declined to suspend the proceeding, citing "(1) the time it likely will take for [the] uncertainties to be resolved, (2) the effect of the FCC's merger conditions^[8] during that interval, and (3) the Eighth Circuit's sustaining of forward-looking pricing [as a matter of principle, despite its rejection of the specific version of forward-looking pricing embodied in the rule it had vacated]."⁹

Verizon sought reconsideration of that ruling, in part on the grounds that the FCC had recently construed its earlier order approving the NYNEX/Bell Atlantic merger in a manner assertedly suggesting that the Bell Atlantic/GTE Order likewise did not require TELRIC pricing as a merger condition.¹⁰ The Judge declined to reconsider, noting the significant difference in wording between the two merger orders and seeing no need to change his conclusion that "what the [Bell Atlantic/GTE] order means may ultimately be a matter for the FCC and the courts to decide, but for present purposes [it] provides an adequate basis for concluding that Verizon remains obligated, notwithstanding

⁷ CC Docket No. 98-184, GTE Corporation and Bell Atlantic Corporation, Memorandum Opinion and Order (rel. June 16, 2000), FCC 00-221 (GTE/BA Order).

⁸ This referred to conditions imposed by the FCC on the earlier NYNEX/Bell Atlantic merger as well as the Bell Atlantic/GTE merger just noted.

⁹ Case 98-C-1357, Ruling on Module 3 Schedule (issued August 24, 2000), p. 7.

¹⁰ Verizon cited the FCC's dismissal of complaints that Verizon had violated such a commitment made in connection with the NYNEX/Bell Atlantic merger. File No. E-98-05, AT&T Corporation v. Bell Atlantic Corporation, and File No. E-98-12, MCI Telecommunications Corporation et al. v. Bell Atlantic Corporation, Memorandum Opinion and Order (rel. August 18, 2000).

the Eighth Circuit's decision, to continue pricing UNEs on a TELRIC basis and will remain so obligated at least until the Eighth Circuit's decision is sustained or becomes non-appealable."¹¹ The proceeding went forward on that basis.

Initial testimony was filed (on February 7, 2000 and, with respect to some issues, on February 22, 2000¹²) by Verizon, jointly by AT&T and WorldCom, Inc., jointly by Covad Communications Company and Rhythms Links Inc., and by FairPoint Communications Corp. Responsive testimony, due June 26, 2000, was filed by Verizon, AT&T (alone), WorldCom (alone), AT&T/WorldCom (jointly), Rhythms/Covad (jointly), the CLEC Coalition,¹³ the CLEC Alliance,¹⁴ Z-Tel Communications, Inc., Cablevision Lightpath, Inc., the Cable Television and Telecommunications Association of New York, Inc. (CTTANY), and the United States Department of Defense and all Federal Executive Agencies (Federal Agencies). Rebuttal testimony, due October 19, 2000, was filed by Verizon, AT&T/WorldCom, Rhythms/Covad, the CLEC Coalition, FairPoint, and DOD/FEA. In addition to these principal filings, supplemental or supplemental responsive or rebuttal testimony on particular

¹¹ Case 98-C-1357, Ruling Denying Request for Reconsideration (issued September 18, 2000), p. 4. The FCC staff has since stated its view that the merger condition has this effect. Letter from Dorothy T. Attwood, Chief, Common Carrier Bureau, to Michael Glover, Verizon Communications, Inc. (September 22, 2000).

¹² Portions of the February 22 testimony were admitted as part of the line sharing track previously referred to.

¹³ The CLEC Coalition comprises Allegiance Telecom of New York, Inc.; Intermedia Communications Inc.; and XO New York, Inc., f/k/a NEXTLINK New York, Inc. Allegiance did not participate in the Coalition's brief on exceptions, but the brief notes that Allegiance's decision not to participate should not be construed as disagreement with the Coalition's exceptions.

¹⁴ At the time testimony and briefs to the Judge were filed, the CLEC Alliance comprised CoreComm New York, Inc.; CTSI, Inc.; Mpower Communications, Inc.; Network Plus, Inc.; RCN Telecom Services, Inc.; and Vitts Networks, Inc. The Alliance filed no brief on exceptions, but its reply brief on exceptions identifies its members as RCN and Focal Communications, Inc.

issues was submitted by Verizon (May 23, September 11, September 25, November 8, November 22, and December 5), Rhythms/Covad (November 13), and CTTANY (November 29).

An attorneys' prehearing conference was held in New York City on November 30, 2000 for the purpose of introducing pre-filed testimony into the record via affidavit, subject to later cross-examination of witnesses as to whom cross had not been waived. Hearings were held before Judge Linsider in Albany on December 7, 8, 12, 13, 15, 19, and 20, and an on-the-record post-hearing attorneys' teleconference was held on December 21. Following the hearings, Staff of the Department of Public Service posed a series of questions to Verizon and AT&T; their responses have been admitted as exhibits 457 and 458 respectively.

The record comprises 4,954 pages of stenographic transcript (numbered 1,150-6,103) and 159 exhibits (numbered 301-459). The following pages of the transcript have been provisionally designated as proprietary: 1620-1877 (public version at 1362-1617), 2067-2216 (public version at 1917-2065), 3110-3189 (public version at 2832-2911), 3813-3958 (public version at 3666-3811), 3984-4008 (public version at 4009-4032), 4059-4135 (public version at 4137-4204A), 4255-4302 (public version at 4206-4253), 4432-4453 (public version at 4456-4476), 4558-4576 (public version at 4541-4557), 5674-5746 (public version at 5599-5672), 4911, 5453-5456. Provisionally proprietary exhibits are 317P, 320P, 324P, 326P, 328P, 330P, 333P, 339P, 358P, 367P, 370P, 375P, 381P-389P, 392P, 411P, 412P, 414P, 417P, 418P, 448P, 453P, and 455P. Judge Linsider's ruling on the final status of the provisionally protected material is pending.

Initial briefs, due February 16, 2001, were filed by Verizon, AT&T, CTTANY, Lightpath, the CLEC Alliance, the CLEC Coalition, the Federal Agencies, FairPoint, Rhythms/Covad, and Z-Tel. Reply briefs, due March 14, 2001, were filed by those parties except for Z-Tel.

In a recommended decision issued May 16, 2001, Judge Linsider treated all issues in the case other than duct and

conduit rentals; the latter were the subject of a supplemental recommended decision issued June 18, 2001. (The two documents are referred to in this order as the "recommended decision" and the "supplemental recommended decision.")

Briefs on exceptions to the recommended decision have been submitted by Verizon, AT&T, WorldCom, Rhythms/Covad, the CLEC Coalition, FairPoint, Z-Tel, Focal Communications, Inc., Metropolitan Telecommunications (MetTel), Broadview Networks, Inc., and the New York State Attorney General.¹⁵ Reply briefs on exceptions have been submitted by those parties except for Focal, FairPoint, and Broadview, and by the CLEC Alliance.¹⁶ On July 18, 2001, Verizon moved to strike, as improper response, certain portions of the reply briefs on exceptions of Z-Tel and AT&T and to submit further argument on certain points made by those parties and by WorldCom; AT&T, WorldCom, and Z-Tel replied to the motion. We consider it in connection with the specific issues to which it pertains.

Briefs and reply briefs on exceptions to the supplemental recommended decision have been submitted by Verizon and CTTANY. RCN Telecom Services, Inc. (RCN) has submitted a late reply brief on exceptions with a request for leave to file it; that request is granted.

Following the September 11 attack, we invited comment from the parties on its implications, if any, for this proceeding. In general, Verizon cited a variety of factors that, in its view, made the existing record outdated and required further consideration; the CLEC parties saw no implications for the proceeding whatsoever and urged prompt decision on the basis of the existing record. Later, Department of Public Service Staff, as a party to our proceeding examining

¹⁵ Several of these parties had not previously participated actively in the proceeding. Consistent with 16 NYCRR 4.3 (c)(2), the Judge authorized their late intervention on the condition that they be bound by the record developed to that point.

¹⁶ As noted, the CLEC Alliance now comprises RCN and Focal.

future regulatory arrangements for Verizon,¹⁷ filed a motion in that proceeding and this, urging us to hold the decision in this proceeding in abeyance and to consider UNE rates in the Incentive Plan proceeding, where they might become part of an overall, integrated negotiated outcome. We granted Staff's motion on November 30, 2001,¹⁸ imposing a 60-day limit on the negotiation effort, directing the parties and the settlement judge to report within 30 days on their progress, and noting that we would then consider alternatives in the event the negotiations were not proving productive.

It is now some 60 days since negotiations began, and no agreement incorporating UNE rates has been reached. Nor do we see any need to delay decision with respect to UNEs for the reasons urged by Verizon in its comments on the implications of the September attack. That event, though vast in its overall impact, has at most a marginal effect on the TELRIC analysis of forward-looking costs being conducted here. Verizon argues that the disaster shows a need for greater infrastructure redundancy, to be achieved either through modification of its own network or through partial duplication of that network by facilities-based competitors (concerns echoed in comments filed by Lightpath); but those considerations, even if sound, are too inchoate to be taken into account here. Even if the September 11 attack turns out to warrant changes in network design, that process will take time, and its results cannot be anticipated. The associated uncertainty does not warrant delaying the decision in this case; for we live in a world of constant change, where decisions must be made on the basis of the best information available at a given time. Later events (relating to network design, the legal status of TELRIC, or a host of other matters) may warrant revisiting those decisions, but if they are deferred pending the pursuit of an elusive certainty, they will never be made. And

¹⁷ Case 01-C-1945, Verizon New York Inc. - Cost Recovery and Future Regulatory Framework, also known as the Verizon Incentive Plan proceeding.

¹⁸ Cases 01-C-1945 and 98-C-1357, Order Granting Staff Motion (issued November 30, 2001).

while Verizon properly cites the benefits of facilities-based competition, we have long recognized those benefits; and the UNE rates we are adopting here should not impede its development. Meanwhile, we have a responsibility under the 1996 Act to set proper UNE rates and avoid allowing unwarrantedly high UNE rates to impede the development of competition, and we accordingly proceed to set those rates on the basis of the extensive record here before us.

LEGAL CONTEXT; THE STATUS OF TELRIC

This case, like the First Elements Proceeding, has been litigated on the basis of the Federal Communications Commission's total element long-run incremental cost (TELRIC) standard despite the legal cloud cast over the standard by a federal court decision. Because of the importance of the standard, we begin with a review of its background, nature, and current status.

Under §252(d)(1) of the Telecommunications Act of 1996 (the 1996 Act),

Determinations by a State commission of the just and reasonable rate ... for network elements ...--

(A) shall be--

(i) based on the cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the ... network element... and

(ii) nondiscriminatory, and

(B) may include a reasonable profit.

In its regulations and order implementing the 1996 Act,¹⁹ the FCC determined that these pricing provisions should be carried out by setting prices on the basis of each element's TELRIC, along with a reasonable allocation of forward-looking common costs.

In Phase 1 of the First Elements Proceeding, we described TELRIC in the context of other costing methods.²⁰ We noted that TELRIC was a term coined by the FCC to describe the version it was adopting of the more familiar total service long-run incremental cost (TSLRIC) method. An analysis of TSLRIC amounts to an estimation of long-run incremental cost (LRIC) where the increment of service that is studied is the total demand for the service. LRIC, in turn, measures incremental cost (i.e., the cost of producing an additional quantity of a good or service) over a period long enough so that all of the firm's costs become variable or avoidable.

All of the foregoing costing methods are forward-looking, taking account of the costs to be incurred in the future, rather of than embedded, historical costs. In defining the TELRIC method, the FCC added the specification that costs "should be measured based on the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of the incumbent [local exchange carrier's] wire centers."²¹ This is the so-called "scorched node" premise, which takes as a given only the location of the incumbent local exchange carrier's (ILEC's) existing wire centers and otherwise contemplates a network designed in accordance with the most efficient technology available, regardless of the technology actually deployed.

After the start of the First Proceeding, the FCC's TELRIC rules were stayed and ultimately vacated by the Eighth

¹⁹ Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket Nos. 96-98 and 95-105, First Report and Order (rel. August 8, 1996)(the Local Competition Order).

²⁰ Phase 1 Opinion, pp. 9-15.

²¹ 47 C.F.R. §51.505(b)(1).

Circuit Court of Appeals on the grounds that the FCC had exceeded its authority in adopting them.²² The case nonetheless proceeded to decision on a TELRIC basis, inasmuch as all parties' studies had been based on TELRIC; even Verizon, which objected to TELRIC and reserved its rights to submit other studies if TELRIC were overturned, had submitted a TELRIC study in view of the FCC's regulations. We noted that "TELRIC is certainly a reasonable approach to use, though just as certainly not the only one; and, as [Verizon] recognizes, as a practical matter there is no alternative other than the very unattractive one of temporary rates while a lengthy new case is litigated."²³

The United States Supreme Court eventually reversed the Eighth Circuit on the issue of FCC authority, reinstated the rules, and remanded for consideration of the substantive challenges that had been raised to TELRIC pricing.²⁴ That remand eventuated in an Eighth Circuit decision that again overturned portions of the FCC's rules, including the TELRIC definition in §51.505(b)(1), cited above, this time on the grounds that it was inconsistent with the provisions of the 1996 Act requiring UNE prices to be based on the cost of providing the elements. In the Eighth Circuit's judgment, "Congress was dealing with reality, not fantasizing about what might be," and basing prices on the hypothetical network of TELRIC violated Congress's intent that the costs to be taken into account are those of "providing the actual facilities and equipment that will be used by the competitor (and not some state of the art presently available technology ideally configured but neither deployed by the ILEC nor to be used by the competitor)."²⁵ The Eighth Circuit added, however, that it did not reject the use of forward-looking costs in the setting of UNE rates; and it declined to reach the claim that TELRIC rates would amount to an unconstitutional taking of the ILEC's property, regarding that claim as unripe for decision

²² Iowa Utilities Bd. v. FCC, 120 F.3d 753 (8th Cir. 1997).

²³ Phase 1 Opinion, p. 15.

²⁴ AT&T Corp. v. Iowa Utilities Bd., 525 U.S. 366 (1999).

²⁵ Iowa Utilities Bd. v. FCC, 219 F.3d 744 (8th Cir. 2000).

until actual rates could be evaluated. The Supreme Court has agreed to review the Eighth Circuit's determination, and the TELRIC rule at issue remains in effect pending that review.

Following the Eighth Circuit's decision last summer, Verizon moved to stay this proceeding in view of the uncertainty over the costing standard that would ultimately apply; CLECs generally opposed the motion. As recounted above, the Judge denied the motion and its later renewal, and the proceeding went forward on a TELRIC basis. In its brief to the Judge, Verizon continued to stress the uncertainty associated with the TELRIC standard pending Supreme Court review and urged deferral of any decision, but the Judge saw no more need to recommend deferral than he did earlier to cut off the litigation. He noted that "the TELRIC rules remain in force, and the proceeding has gone forward on a TELRIC basis; the Supreme Court's decision cannot be predicted and is unlikely to be rendered before the end of the year at the earliest; and the issues in the case are ripe for decision. That decisional process should go forward."²⁶

On exceptions, Verizon again urges that decision be deferred pending Supreme Court review of the TELRIC standard. It cites the uncertainty and administrative costs associated with frequent rate changes--as would be needed if the Supreme Court rejected TELRIC soon after a TELRIC-based decision were reached here--and it sees the impossibility of predicting the Supreme Court's ultimate decision as warrant for deferring a decision, not for going forward. It adds that the Supreme Court's decision is no longer as far in the future as it was, noting that oral argument in the TELRIC case was scheduled to be held in early October.²⁷ If new rates nevertheless were to be set now, Verizon would make them temporary until new rates were set in accordance with the Supreme Court's mandate, seeing "no

²⁶ R.D., p. 10.

²⁷ Argument was held as scheduled; the Court's decision is pending.

other way to avoid injustice if the Supreme Court ultimately rules that the current TELRIC standard is unlawful."²⁸

Several CLECs object to any delay in our decision, stressing the substantial reduction in UNE rates that would follow from adoption of the Judge's recommendations and asserting a need to accomplish that reduction promptly. They object as well to making rates temporary until they are set in accordance with a Supreme Court decision. WorldCom, for example, charges that Verizon is seeking delay so that it may continue to overcharge for UNEs, and it argues that the Supreme Court will likely not decide the case until early 2002, at which time a lengthy remand to the FCC could ensue. It notes that Verizon objected to delaying a New Jersey UNE proceeding pending Supreme Court review, attributing Verizon's interest in prompt decision there to the fact that it has not yet received §271 approval in that state. The CLEC Alliance notes that regardless of the Eighth Circuit's decision, we retain a statutory responsibility to ensure that rates are just and reasonable, and it argues that the recommended decision shows that they are not. It adds, among other things, that there is a strong public interest in prompt decision, pointing to the FCC's emphasis, in its New York §271 decision, on our active review of Verizon's UNE rates.

In a motion filed August 23, 2001, Verizon renews its request that we postpone decision in the case until after the Supreme Court rules. In the alternative, it would have us reopen the record to take account of a statement in the FCC's reply brief to the Supreme Court. According to Verizon, the statement endorses a TELRIC rate of return that takes greater account of competitive and regulatory risks than did the Judge. Various CLECs respond that Verizon overstates the significance and misrepresents the import of the FCC's statement and is merely seeking, once again, to delay the proceeding.

We see no more need than did the Judge to withhold or postpone decision in this case pending Supreme Court action.

²⁸ Verizon's Brief on Exceptions, p. 10.

TELRIC remains the standard that must be applied; we cannot say when the Supreme Court will reach its decision, what that decision will be, or when the ensuing dust will settle; the Eighth Circuit, though rejecting aspects of TELRIC, did not reject forward-looking pricing in principle; and the parties are entitled to a decision on the basis of the comprehensive record that has been compiled. Rates need not be held temporary, given that TELRIC is now the law whatever may be its future fate; and there is no need to reopen the record, as Verizon requests in its recent motion. The statement in the FCC brief cited by Verizon simply explicates the TELRIC standard as it has been in place from the start and applied in this proceeding. It embodies no new policy pronouncement (and, as some CLECs suggest, could not properly do so given its nature and context). Verizon's August 23 motion is denied, and we proceed to decision on the substantive issues before us.

One further aspect of the TELRIC background should be briefly noted. Section 254 of the 1996 Act directed the FCC to establish a universal service support system to ensure the delivery of affordable telecommunications services. In the ensuing proceeding (the Universal Service Proceeding), the FCC ultimately adopted a forward-looking cost model to be used in determining an eligible carrier's level of universal service support. The FCC adopted its cost model in two stages: in the first stage, it adopted the Model Platform, which contains the fixed aspects of the model²⁹; in the second stage, it selected the input values for the Model Platform.³⁰ The presentations and analysis in the Universal Service Proceeding can sometimes be instructive; but it is important to keep in mind the FCC's caution that its model "was developed for the purpose of determining federal universal service support, and it may not be

²⁹ Federal-State Joint Board on Universal Service et al., CC Docket Nos. 96-45, 97-160, Fifth Report and Order (rel. October 28, 1998).

³⁰ Id., Tenth Report and Order, (rel. November 2, 1999).

appropriate to use nationwide values for other purposes, such as determining prices for unbundled network elements."³¹

OVERVIEW OF COST STUDIES,
RECOMMENDED DECISION, AND EXCEPTIONS

Cost Studies and Recommended Decision

Two comprehensive analyses of UNE costs and prices were submitted in the proceeding: Verizon's own cost studies, and the HAI 5.2-NY Model (HAI Model) jointly sponsored by AT&T and WorldCom. To state the matter most generally,³² Verizon's studies began with the investment associated with each network element, determined by identifying the pertinent material cost, applying a utilization factor to develop a material cost per unit, and applying investment loadings to capture certain additional costs. It then used annual cost factors (ACFs)--representing the calculated relationships between expenses and investments, other expenses, or total revenues--to translate investments into monthly costs. In a separate process, Verizon developed nonrecurring charges by estimating relevant labor costs and applying certain ACFs to them. Verizon's study relies, in large part, on its actual historical data and estimates by its engineers, adjusted in a manner intended to reflect TELRIC assumptions. The HAI Model, meanwhile, develops UNE costs in a bottom-up manner, by modeling the construction of a telecommunications network on the basis of demand quantities, network component prices, and costs and expenses.

The parties offered arguments, among many others, based on the inherent reasonableness of the results produced by each study, but the Judge rejected them, finding that "if the costs are reasonably and fairly calculated, the price chips should be allowed to fall where they may."³³ He went on to find

³¹ Id., ¶32.

³² For a more comprehensive description of the two analyses, see R.D., pp. 20-25. Additional background on aspects of Verizon's study at issue on exceptions is provided below, where pertinent.

³³ R.D., p. 32.

that the HAI Model continued to suffer from many of the same flaws that we identified in its predecessor Hatfield Model submitted in the First Elements Proceeding, and he used the Verizon study, which was sounder in concept despite its need for substantial adjustment, as the starting point for analysis. He summed up his conclusion by noting that "as a matter of theory, HAI is a ponderous tool that is too far removed from the reality of Verizon's circumstances to be used when there is an alternative better grounded in real data. As a practical matter, Verizon's study lends itself to adjustment in a manner that appears able to produce a sound result."³⁴

Most of the recommended decision, accordingly, was devoted to adjusting Verizon's studies. The resulting UNE prices were, in general, well below not only Verizon's proposals but also the prices currently in effect. The adjustments will be discussed in this order only to the extent raised on exceptions; for purposes of this overview, we note only the determination on the vigorously argued issue of switching costs. The Judge there found that the parties had argued to a stalemate on the question of what vendor discounts to impute in estimating switching investment and recommended use of a surrogate method, not requiring selection of a discount figure, to determine those costs. Verizon and its opponents alike except to both the surrogate method in principle and to its manner of implementation.

Verizon's Exceptions

As noted, Verizon continues to advocate, as its primary position, deferral of any determination in this proceeding until after the Supreme Court has decided the fate of TELRIC; until that time, its existing UNE rates, set in the First Elements Proceeding, would remain in force. Beyond that, it sees "fundamental errors" in the recommended decision and alleges that adoption of the Judge's recommended rates would violate the statutory requirement that rates be cost-based and

³⁴ R.D., p. 34.

"would effect an uncompensated taking of Verizon's property for the benefit of competitors, would violate federal law by requiring Verizon to provide UNEs at below-cost rates, and would disserve the Commission's pro-competitive policies by further deterring the development of facilities-based competition."³⁵ It expresses special concern about substantial recommended reductions in its proposed rates related to the UNE Platform³⁶ (UNE-P), noting, for example, that the non-recurring provisioning charge was reduced by over 70% and contending that the overall effect of the UNE-P price changes would be to reduce revenues very substantially. More specifically, it excepts to recommended reductions of about two-thirds in local switch usage rates, which it attributes to a series of errors regarding switching costs.

Recognizing that the Judge recommended use of its own studies rather than the HAI Model as the basis for analysis, Verizon criticizes the recommended adjustments to its study on a variety of grounds, both conceptual and computational. It objects in particular to a series of adjustments based on the Judge's finding that it failed to meet its burden of proof, charging that they lack any record basis, fail to credit unopposed evidence submitted by Verizon, and impose a burden impossible to meet. It contends as well that some adjustments would adversely affect service if Verizon's network were in fact designed in the manner contemplated by the adjustment. Finally, it contends that the recommended rates would contravene the public policy favoring the development of facilities-based competition, asserting that they "will provide CLECs with a direct subsidy from Verizon in the form of resale at fire-sale rates, that will eliminate any incentive for the development of competitive networks."³⁷

³⁵ Verizon's Brief on Exceptions, p. 1.

³⁶ The UNE Platform refers to an arrangement under which a CLEC orders, and Verizon provides, all the unbundled elements that make up a customer's local service.

³⁷ Verizon's Brief on Exceptions, p. 6.

CLECs' and Other Parties' Exceptions

Parties other than Verizon offer no overarching critique of the recommended decision, and none of them excepts to the Judge's rejection of the HAI Model. They generally support the recommended decision, but propose various specific modifications, urging us to "finish the job"³⁸ of moving all the way to properly TELRIC-based costing. Some CLECs characterize the recommended decision as confirming their view that current UNE rates are seriously overstated and point as well to lower UNE rates in other jurisdictions. They defend the Judge's use of burden of proof considerations, a matter requiring more detailed treatment before we turn to specific issues.

BURDEN OF PROOF

As noted, Verizon objects to a series of recommendations in which the Judge cited its failure to have met its burden of proof. Contending that adjustments were made on that basis even where Verizon had supported its presentation with substantial evidence and no party had submitted contrary evidence, it charges that "merely reciting the 'burden of proof' mantra, as the RD frequently does, cannot justify these disallowances and reductions."³⁹ It cites a series of Appellate Division cases finding error where an administrative agency refused to accept uncontradicted evidence presented by a party, even where the party had the burden of proof; and it contends the Judge's finding, for example, that its engineering judgment was insufficient evidence left it unable to meet the burden of proof that he imposed.

In response, several CLECs challenge the premise that Verizon's evidence often went unopposed, citing the testimony they submitted. Verizon may disagree with their evidence, they say, but that does not mean it does not exist. Beyond that, they dispute Verizon's legal argument, distinguishing the cases it cites and arguing that they are unrelated to the work of this

³⁸ AT&T's Brief on exceptions, p. 2.

³⁹ Verizon's Brief on Exceptions, p. 3.

agency. WorldCom notes, in contrast, the courts' recognition of our independent judgment and expertise in ratemaking, in which we are not confined to the presentations made by the parties. AT&T points to our endorsement, in the Phase 2 Opinion, of the Judge's suggestion that the ILEC in a UNE case bears a burden of proof higher than that of the utility in a traditional rate case.

Whether a party has borne its burden of proof can only be decided on an issue-by-issue basis, and one may disagree in some instances with the Judge's assessment of the record before him. But as a general matter, we are satisfied that the Judge used burden of proof as an analytical tool, not a mantra. Verizon's evidence, in many cases, is not so uncontroverted as Verizon would lead us to believe, and the CLECs are right to refer to our ability to use our independent expertise in assessing the state of the record and whether the party bearing the burden of proof has borne it. The cases cited by Verizon relate, for the most part, to questions of objective fact rather than of expert judgment to be applied to a range of reasonable alternatives, and they are distinguishable on that and other grounds.

It is worth recalling, in this regard, why the utility (or the ILEC) has the burden of proof. The Judge put it as follows:

The utility's data and experience are a good source of information on what can be expected in the future, but the utility has a clear self-interest in erring on the side of high cost forecasts. For both reasons, it bears the burden of proof, and the regulator must ensure that only proven costs are allowed. In so doing, the regulator should avoid groundless speculation or what Verizon characterizes as "the Panglossian perspective of the CLECs, who seem to believe that all difficulties will magically dissolve in a sufficiently 'forward looking'

environment."⁴⁰ But where a range of estimates is suggested by the record, regulators have always made reasonable adjustments that impel a utility to seek efficiencies, just as it would be impelled to do by a competitive market.⁴¹

It is also worth recalling how the burden of proof is administered, something pertinent to a number of issues. In the Phase 2 Recommended Decision, the Judge explained that in a traditional rate case,

the regulated utility has the ultimate burden of proving, by clear and competent evidence, that its proposed rates, and the costs on which they are based, are reasonable; but a rebuttable premise of regularity attaches to activities conducted in the normal course of business, and the utility's initial presentation need not contain, for example, evidence that other ways of conducted all such activities were considered. But if another party discharges the burden of going forward with evidence showing that a claimed cost is unreasonable, then the utility has to persuasively rebut that evidence in order for the cost to be allowed.⁴²

The Judge added, however, that because "the activities being reviewed [in a UNE case] are in some respects novel, the traditional premise of regularity is weakened, and it would be reasonable to require more of an affirmative showing that the [ILEC] proceeded reasonably."⁴³ These observations were and remain valid.

⁴⁰ Verizon's Reply Brief, p. 75 (footnote in original).

⁴¹ R.D., p. 87.

⁴² Phase 2 R.D., p. 26.

⁴³ Id.

With these general comments as background, we turn to the specific issues presented on exceptions. Following the sequence used by both Verizon and AT&T in their briefs, we start with the important and hotly contested issue of switching costs.

SWITCHING COSTS

Introduction

The Judge recommended substantial reductions in Verizon's rates for unbundled switching. They result not only from his recommended treatment of switch material costs already noted, but also from his adjustments to installation costs and to the allocation of costs between usage and non-usage sensitive elements. Verizon argues, overall, that "the recommended reductions in local switching rates . . . have the most significant impact on Verizon's finances. Imposing this crushing financial burden on Verizon would be utterly unwarranted: There is simply no lawful basis for the adjustments to Verizon's proposed switching rates that are recommended in the RD."⁴⁴ Other parties argue, conversely, that the Judge did not go far enough in reducing these rates. WorldCom, for example, notes that the recommended rate would reduce the statewide average switching cost of approximately \$0.003 per minute of use (MOU) to approximately \$0.001 per MOU and would reduce the per-month per-line unbundled switching cost for CLECs providing service via the UNE platform from approximately \$7.35 to approximately \$2.74. It urges, however, that we go further and reduce the rates to what it sees as proper TELRIC levels, including a statewide average of \$0.0008 per MOU.

Material Investment

1. Background and Recommended Decision

This issue has its roots in Phase 1 of the First Elements Proceeding, and its history, fully recounted by the Judge, provides important background here. In Phase 1, we

⁴⁴ Verizon's Brief on Exceptions, p. 10.

expressed a lack of confidence in the sharply conflicting cost estimates suggested by the parties' different studies, and we set rates on the basis of an analysis by our Staff. In so doing, we noted, among other things, that in making an adjustment to capture the downward trend in switching costs, we "did not take account . . . of the atypically large discounts received by [Verizon] from its [switch] vendors after 1994 in connection with a major switch replacement program."⁴⁵ That decision rested, in large part, on Verizon's attribution of those deep discounts to the switches' having been purchased as part of its program to replace analog switches with digital. Verizon argued that vendors were willing to offer unusually large discounts in connection with such replacement programs (to encourage upgrades that create a market for new software), but that the replacement program was nearly complete and the discounts therefore were unlikely to continue or recur. On rehearing, we rejected Verizon's broadbased critique of the Staff method for setting switching costs as well as WorldCom's claim that the price reduction factor was too low, finding that WorldCom had "offered no new reason for rejecting the fully explained premise that the unusually large discounts associated with analog-to-digital conversion would not be replicated."⁴⁶

Later, in Phase 3 of the First Proceeding, evidence was presented suggesting that the deep discounts might, in fact, be available for all purchases of new switches, not only large-scale replacement programs. Several CLEC parties moved to reopen Phase 1 to redetermine switch costs in light of the newly adduced evidence; Verizon objected on a variety of grounds. We were unimpressed by Verizon's belittling, as "inadvertent misstatement," of its own assertion that the higher discounts were uniquely associated with the analog-to-digital replacements and by its suggestion that the new information lacked significance because of the manner in which switches are

⁴⁵ Phase 1 Opinion, p. 85, n. 1. See also a similar statement in Attachment C to that opinion, Schedule 2, page 1 of 3.

⁴⁶ Phase 1 Rehearing Opinion, p. 40.

purchased. We nevertheless denied the motion to reopen, citing the risks of selective adjustment and adding that the new evidence, even if borne out, could not generate a simple arithmetic correction to our Phase 1 calculations. We went on to note as well the likely desirability of reviewing UNE rates in general before too long, and we therefore stated our intention to institute the present proceeding. Finally, in view of the uncertainties associated with the newly adduced evidence, we left switching rates temporary, subject to future refund or reparation, even though all other UNE rates set in the First Elements Proceeding have become permanent.

In the present case, the parties have disputed both the qualitative issue of whether to posit new switch discounts or the lower "growth" discounts (i.e., the discounts associated with adding capacity to existing switches) that would otherwise be available, and the quantitative issue of how each type of discount should be estimated. After reviewing the arguments in some detail, the Judge reiterated his view, first stated in his Phase 3 recommended decision, that, as a matter of theory, growth discounts were not applicable in a TELRIC study, which contemplated instantaneous installation of a new network. He nevertheless went on to hold that several factors precluded application of that theoretical result here and now. He noted, first, that "application of a purely new-switch discount, on the premise that a hypothetical new network designed to serve the full increment of demand was dropped into place instantaneously, could be problematic under the Eighth Circuit's decision" noted above.⁴⁷ The Judge recognized that we are not subject to the Eighth Circuit's direct authority (and that its decision in any event had been stayed), but he pointed out as well that the decision had been relied on by United States District Court for the Northern District of New York⁴⁸ in its decision in a case growing out of the First Elements Proceeding and other actions.

⁴⁷ R.D., p. 132.

⁴⁸ MCI Telecommunications Corp. v. New York Telephone Company, No. 97-CV-1600, (N.D.N.Y., March 7, 2001).

The Northern District said, in light of the Eighth Circuit's decision, that "price determinations made on forward-looking cost calculations cannot be based on the forward-looking costs of an 'idealized network,' but must be based on the incremental costs that an incumbent local service provider actually incurs or will incur."⁴⁹ Judge Linsider suggested that statement "calls into question the propriety of an exclusively new-switch discount assumption premised on an instantaneously installed hypothetical network."⁵⁰

Perhaps more important than the legal issue, in the Judge's view, was the factual one of ascertaining what a new-switch discount would be in the hypothetical situation of an instantaneously installed new system. The Judge credited Verizon's argument that the existing new-switch discount was set partly in contemplation of additional sales to which only the growth discount would apply, and he reasoned that the new-switch discount would differ from its current level in the hypothetical situation in which no growth-discount sales were anticipated. On the other hand, he continued, discounts are negotiated in light of the particular purchases contemplated, and "it is entirely possible that the prospect of . . . an extensive series of purchases [associated with installation of an entire network, even over time rather than instantaneously] could have generated discounts substantially higher than those under the existing contracts, and a forward-looking analysis must take account of that prospect."⁵¹ In light of all of these factors, the Judge concluded that

this is an issue on which the parties have fought hard and reached a stalemate: each has shown the other's position to be untenable. Regardless of the decision ultimately to be reached on the FCC's rule, this record simply establishes no "right" level of discount to use--in part, as noted, because the very act of assuming a switch

⁴⁹ Id., slip opinion p. 25.

⁵⁰ R.D., p. 132.

⁵¹ R.D., p. 133.

purchase pattern would affect the data on the record regarding the level of the respective discounts.⁵² Discounts will depend on a host of factors, including the contracts negotiated between vendor and purchaser, and we have no reason to believe that Verizon's existing, complex contracts, relied on by both sides as the basis for the radically different discounts they advocated, would, in fact, read the same had they been negotiated in the various contexts that TELRIC or other forms of long-run forward-looking costing might lead us to posit.⁵³

Having reached that conclusion, the Judge went on to estimate switching costs on the basis of a surrogate analysis that used as its parameters the per-line switching costs estimated on the one hand by Verizon and the other hand by AT&T/WorldCom and looked as well to various estimates that had been presented to the FCC by the FCC's staff and a majority of the state members of an FCC/State Joint Board. Taking account of all of those factors, he recommended an estimate of per-line switching costs of \$105, somewhat below the \$111 arithmetic midpoint of the parameters. He invited the parties to convene a settlement conference at which they might stipulate to some other number that both sides could accept; neither party responded to the invitation.

On exceptions, parties challenge both the Judge's decision not to estimate a discount and the manner in which he conducted his surrogate analysis.

2. Estimating a Discount

Alleging that there is "no reasoned basis in the record"⁵⁴ for a decision that splits the difference between the

⁵² The difficulty is analogous to those posed by situations, known in both physics and the social sciences, in which outcomes are influenced by the mere fact of observation. (Footnote in original.)

⁵³ R.D., p. 133.

⁵⁴ Verizon's Brief on Exceptions, p. 11.

parties, Verizon challenges the premise that the parties have argued the issue to a stalemate. It disputes AT&T's contention that a forward-looking construct implies a one-time purchase of new switches, citing the FCC's statement that TELRIC-based rates must recover "the incremental costs that incumbents actually expect to incur in making network elements available to new entrants."⁵⁵ Pointing to precedent in the First Elements Proceeding as well as the Northern District's decision, it contends that the proper price to use is "the material price Verizon will actually pay, incrementally, in the foreseeable future, under in-place vendor contracts for the particular equipment being costed."⁵⁶ The discount associated with such purchases, it continues, is the growth discount, for digital switches are already deployed in Verizon's network and will never be replaced with new digital switches, inasmuch as the next generation of switching equipment will be available by the time existing switches are to be replaced. The existing installations will only grow, and, for that purpose, the growth discount is applicable. Verizon also notes, as did the Judge, that the new-switch discount would be different in a context in which no growth purchases were contemplated. It adds that a new-switch-only premise would require installing excess capacity to allow for growth and a higher depreciation rate to recognized more frequent switch replacements, and might increase switch prices by creating demand in excess of supply. WorldCom dismisses those arguments as red herrings that introduce assumptions inconsistent with TELRIC.

AT&T, meanwhile, renews its argument that the new-switch discount should be used. It sees no basis for treating switching costs differently from the other network components, all of which are presumed by the TELRIC construct to be part of an instantaneously installed new system and are, nevertheless, priced on the basis of currently available vendor prices. It urges use of a \$51 per-line switch material investment--the

⁵⁵ Local Competition Order, ¶685.

⁵⁶ Verizon's Brief on Exceptions, p. 12.

figure generated by its restatement of Verizon's cost study on the basis of what it takes to be available new switch discounts--and it suggests that the next generation of switching referred to by Verizon will likely be even cheaper.

WorldCom likewise argues that TELRIC necessarily assumes total reconstruction of the network through new rather than growth switches. It cites the FCC's decision to that effect in the Universal Service Tenth Report and Order and quotes at length from a decision by United States District Court for the District of Delaware endorsing the use of new switch discounts.⁵⁷ WorldCom argues that the Delaware District decision is entitled to greater weight than that of the Northern District, inasmuch as the latter was based on the erroneous evidence on switching discounts adduced in Phase 1 of the First Elements Proceeding. WorldCom points as well to the Judge's statement that use of new-switch discounts is valid in theory, contends that the recommended decision assumed an instantaneously installed hypothetical network throughout, and argues that there was no reason to depart from that assumption with regard to switching costs. It disputes the Judge's concern that the new switch discount might be different in a hypothetical situation that failed to contemplate subsequent growth purchases, contending that TELRIC requires just such an assumption.

The Attorney General also urges use of fully discounted switch prices, arguing that the Northern District's statement cited by the Judge constituted dicta--inasmuch as the rates there under review were not based on the cost of the "idealized network" questioned by the court--and that the Northern District had relied on an Eighth Circuit decision that was stayed pending appeal and inapplicable in New York. In any event, the Attorney General contends, the Northern District decision did not preclude use of new-switch discounts. Beyond that, the Attorney General cites the progress made in New York

⁵⁷ Bell Atlantic-Delaware, Inc. v. McMahon, 80 F. Supp. 2d 218 (D. Del. 2000).

toward competitive telephone markets and argues that "UNE rates that allow Verizon to recover excess monopoly costs would not be just or reasonable in a regulatory regime moving toward competitive markets."⁵⁸ In addition, the Attorney General urges us to take into consideration the over-supply of telephone switch manufacturing capacity and the growing availability of surplus switches from financially troubled telecommunications companies.

In its reply, Verizon reiterates its view that the FCC's Universal Service decision is inapposite, given the FCC's admonition that the proxy model used there should not be used to price UNEs and its rejection, in the §271 proceeding, of the premise that UNE prices must be based purely on new-switch discounts. Recognizing the conflict between the Northern District decision and that of the Delaware District, it urges assigning greater weight to the former, which is more local, more recent, and more cogent. That the Northern District may have relied on flawed Phase 1 evidence is of no import, since the court's pertinent statement involves not an analysis of the evidence but the principle that we should be guided by what the ILEC will actually pay.

The arguments on exceptions add little to those that led the recommended decision, in Verizon's characterization, to throw up its hands.⁵⁹ But it is not throwing up one's hands to recognize that a particular line of inquiry shows a great likelihood of being unproductive and to seek an alternative means of achieving a fair result. That is what the Phase 1 Staff analysis of switching costs sought to do in the face of parties' estimates so far apart as to call both into question, and that is what the recommended decision sought to do here.

Verizon correctly notes that we never had occasion to rule on the Judge's observation, in his Phase 3 recommended decision, that growth discounts are not applicable in a TELRIC

⁵⁸ Attorney General's Brief on Exceptions, p. 6.

⁵⁹ Verizon's Brief on Exceptions, p. 10.

study.⁶⁰ In the present recommended decision, the Judge has backed off from that observation, and he was right to do so. TELRIC contemplates a new, state-of-the-art network--including, for example, all-fiber feeder, without regard to what is now in place--but it does not necessarily follow that the new network is purchased and installed in a single transaction. And even if it did, any attempt to establish the vendor discounts that would apply in that transaction would be a hopeless exercise in speculation, if not "fantasy." The parties have argued long and hard over what discounts flow from Verizon's existing vendor contracts in their complexity; for the reasons described by the Judge, there is no way to arrive at a reasonable estimate of what those discounts would be under hypothetical contracts growing out of unknown transactions. Beyond that, Verizon has identified additional types of costs that could be expected to be incurred if the complete network were installed all at once, and we lack any reasonable estimate of the amounts of those costs.

To rule out exclusive use of the new switch discount, of course, does not mean that exclusive reliance on the growth discount is proper. For one thing, it has been clear since Phase 3 that relatively deep new-switch discounts are not limited to full-scale switch replacements, and there is no basis for agreeing with Verizon that incremental replacement of the system over time would entail growth discounts only. Beyond that, the Judge correctly noted here as well the difficulties that attend any effort to estimate the actual discounts that would be available: "It is entirely possible that the prospect of such an extensive series of purchases could have generated discounts substantially higher than those under the existing contracts, and a forward-looking analysis must take account of that prospect."⁶¹

Having determined that the discount to be applied cannot be estimated directly from the existing contracts, we

⁶⁰ Verizon's Reply Brief on Exceptions, pp. 2-3, n. 3.

⁶¹ R.D., p. 133.

might attempt to somehow estimate the discount indirectly, such as by melding new-switch and growth-switch discounts in an effort to capture the real forward-looking cost, independent of vendors' marketing strategies. Alternatively, we can bypass any effort to determine the discount and proceed to estimate the per-line switching costs themselves through some surrogate means, as the Judge did. The latter process appears preferable, for there is no reason to believe that an indirectly estimated discount level will be more accurate than an indirectly estimated cost figure; and the intermediate step of indirectly estimating a discount will not enhance the ultimate result. The goal of the effort then becomes to find a surrogate means of estimating a switch cost that is reasonable, fair, and grounded in the record as a whole, and that is what the Judge sought to do. We therefore turn to the specifics of his method, to determine whether the parties' exceptions warrant any adjustments.

3. Surrogate Calculation

Both sides challenge the specifics of the Judge's surrogate method for estimating per line switching costs. Verizon objects to his having taken account of the FCC's conclusions in its Universal Service Tenth Report and Order, noting the FCC's statement that the Universal Service proxy model was not appropriate for UNE costing; that the FCC had stated, in its New York §271 proceeding, that the inclusion of growth discounts did not violate TELRIC; and that Verizon's data on actual costs substantially exceeded the FCC's cost estimates. It also alleges an error in computations underlying the recommended decision's statement that the FCC's Model's per-line cost was \$95; correcting that error (to reflect the fact that switching nodes in Zone 2 are not remotes but, rather, a cluster of one host and three remotes) produces a figure of \$100.65.

Other parties offer adjustments that would reduce the outcome of the surrogate analysis. AT&T contends, first, that the lower parameter of the range identified by the Judge should be not the \$95 HAI input figure but a \$51 figure set forth in

AT&T's June 2000 restatement of Verizon's cost study to take account of available new switch discounts as adduced on the record of this case. Applying the algorithm it sees as implicit in the Judge's analysis (i.e., a downward adjustment of 5.4% applied to the midpoint between the parameters) produces a statewide average switching material investment of \$84 per line rather than the recommended decision's \$105 per-line figure. In addition, AT&T asserts that while Verizon's \$128 per-line figure (used by the Judge as the upper parameter) reflects material investment only, the FCC-based \$95 per-line figure used as his lower parameter is a fully installed price, and the comparable Verizon figure (using the installation cost factor allowed by the recommended decision, discussed below) would be \$178. Again applying the algorithm implicit in the Judge's analysis, AT&T calculates a fully installed switching cost of \$129 per line, which would obviate any separate allowance for installation costs and result in switching usage and digital line port rates that are about 26% and 18% below the levels calculated in the recommended decision.⁶² WorldCom likewise contends that the lower parameter should be \$51 rather than \$95. It points as well to a filing by Ameritech-Illinois showing switching costs below those recommended by the Judge and to still lower rates approved in Michigan.

Z-Tel, which does not object strongly to the surrogate approach in principle, also notes that the Judge's parameters improperly compare a materials-only figure with a fully loaded one and suggests that the lower parameter should be reduced from \$95 to \$73 per line by removing installation costs computed on the basis of the recommended decision's factor. It also urges recognition of AT&T's material investment figure of \$51 per line as well as the possibility that Verizon's \$128 figure might be subject to change on the basis of the recommended decision's treatment of cost of capital. Taking account of these data, it suggest the record supports a per-line switching investment of \$75-\$85.

⁶² AT&T's Brief on Exceptions, p. 13.

Verizon responds, first, that the \$51 figure computed by AT&T in its rebuttal testimony should be disregarded, for it was based on an error in information supplied by a switch vendor that was later corrected. Use of the corrected vendor data produces a per-line price, reflecting the new switch discount, of \$101, higher than the \$95 lower bound used by the Judge.⁶³ It likewise would disregard the FCC's \$95 figure; it agrees that the figure includes loadings and sees the difficulty of accounting for that as an added reason to disregard the figure. It disputes Z-Tel's suggestion that the \$105 figure should be adjusted to reflect the recommended cost of capital, noting the figure is an investment unaffected by cost of capital. Finally, it objects to reliance on rates set in other jurisdictions, where circumstances and methods of analysis may differ in ways unknown.

Several of the parties' specific comments are clearly sound and need to be taken into account. Verizon's increase of the Judge's \$95 lower parameter to \$100.65 is correct, as is the CLECs' observation that that figure is fully loaded and cannot be used as the lower parameter when the higher parameter is not fully loaded. (That observation would apply equally to the corrected \$100.65 figure.) Other comments are in error; the CLECs' proposal to use \$51 as the lower parameter is clearly misplaced, for the reasons identified by Verizon. Indeed, the errors responsible for the \$51 figure reinforce the conclusion that attempting to estimate a proper discount is an exercise in futility.

If a figure of \$100.65 less loadings were used as the lower parameter, the midpoint between the parameters would be below the figure identified by the Judge. But there is, of course, nothing magical about the midpoint; and we would in any event have little confidence in a result much below the estimates of \$110 and \$113 identified by the FCC staff and the majority of state members of the Joint Board, for it is

⁶³ Verizon's Reply Brief on Exceptions, p. 7; the calculations said to support the \$101 figure are set forth in a proprietary attachment to that brief.

significant that two disinterested entities arrived at such close results. When all is said and done, we are satisfied that the Judge reached a reasonable result on the basis of the record in this proceeding, and we deny the exceptions.⁶⁴

EF&I Factor

As already explained, estimating the cost of a fully installed switch requires application to the switch material cost of an "engineer, furnish, and install" (EF&I) factor. Verizon used a factor of 43.5%. AT&T contended that factor was overstated, far exceeding those used by other telephone companies, and it proposed a 25% factor, comprising what it calculated to be Verizon's own average 15% factor for vendor engineering and installation, plus 10%, representing the average of the 8%-12% range of other companies' telephone company engineering and installation. The Judge found that Verizon had shown no reason other than its own actual experience for adopting its higher-than-average figure for telephone company engineering and installation. He held AT&T's 10% figure to be unsupported and unduly low and recommended, as fair and reasonable, a telephone company engineering and installation factor of 15%. Adding that to the 15% for vendor engineering and installation, he recommended an overall EF&I factor of 30%.⁶⁵

Verizon excepts, seeing no basis for substantially reducing its actual costs other than "the 'burden of proof' shibboleth."⁶⁶ It asserts the data cited by AT&T relate to rural telephone companies presumably having smaller central offices

⁶⁴ It is worth noting, moreover, that while we have not used an analysis of discounts to reach the \$105 per-line cost, the record with respect to discounts would in no way preclude that result.

⁶⁵ The Judge noted that the 30% factor was to be computed with reference to Verizon's claimed switching material costs; the resulting dollar amount, applied to the reduced material costs recommended by the Judge, would imply a factor higher than 30%.

⁶⁶ Verizon's Brief on Exceptions, p. 17.

and therefore lower installation costs than Verizon as well as higher per-line material costs (because the discounts enjoyed by Verizon are unavailable to them) and a corresponding lower installation cost percentage. Disputing the Judge's suggestion that the differences between companies cut both ways, given the greater likelihood that Verizon can enjoy economies of scale, Verizon contends that, "in effect, the RD rejected probative, unchallenged, reliable data on Verizon's actual switch EF&I costs, preferring instead to rely on hearsay evidence as to the installation costs purportedly experienced by a sample of unidentified rural companies that clearly are not comparable to Verizon. The premise that this reliance on less relevant, less well-documented data makes the estimated EF&I factor more 'forward looking' is simply perverse."⁶⁷

AT&T responds that Verizon's denial of the record basis for the Judge's adjustment would have us disregard the evidence on which the Judge relied. It contends as well that Verizon relies too heavily on costs associated with its existing network--such as the increased costs associated with multi-story buildings--thereby violating the TELRIC premise of a new network incorporating buildings efficiently designed to accommodate forward-looking switches.

Although actual costs are not the end point of a TELRIC analysis, the evidence presented by AT&T--which Verizon has credibly distinguished from its own circumstances--does not support as substantial an adjustment to Verizon's costs as the Judge applied. On this record, a more conservative adjustment is warranted, and Verizon's EF&I factor will be reduced only to 40%. To that extent, Verizon's exception is granted.⁶⁸

⁶⁷ Id., pp. 16-17 (emphasis in original).

⁶⁸ In its reply brief on exceptions (p. 20), AT&T endorses Verizon's method for applying the Judge's adjustment, which develops a new EF&I factor applied against the Judge's recommended investment instead of applying the Judge's 30% factor to Verizon's original investment. The method appears reasonable and should be used with respect to the 40% factor we are adopting here.

Switching Cost Allocation and Rate Design

1. Usage- and Non-Usage-Sensitive Costs

Switching costs comprise traffic-sensitive and non-traffic-sensitive components; the latter do not vary with usage. Verizon proposed to recover non-traffic-sensitive costs through flat-rated port charges (for both line ports and trunk ports) and to recover traffic-sensitive costs through minutes-of-use (MOU) switch usage charges. Several other parties, primarily Z-Tel, asserted that Verizon incurs no usage-sensitive costs in providing unbundled local switching to itself or competitors and switching costs therefore should be recovered entirely on a non-usage-sensitive basis, through monthly recurring port charges.

The Judge concluded that while Verizon had argued successfully against totally non-usage-sensitive rates, Z-Tel had made a strong case for recovering a greater portion of switching costs on a non-usage-sensitive basis, inasmuch as a UNE user purchased all of the switching capacity, including features and functions associated with any given port. More specifically, the Judge noted that in the First Elements Proceeding, a Verizon witness had presented an analysis of switching costs that would warrant allocating only 34% to usage. Recognizing that data may have changed since then, he recommended a rate structure that assigned no more than 40% of switching costs to usage (rather than the 64% of costs assigned to usage in Verizon's study). The Judge went on to note that though the switching costs assigned to usage were associated almost exclusively with peak busy hour usage, they could not be recovered solely through the usage rate for the peak busy hour. The only alternatives were to recover them over all usage as Verizon proposed, or through non-usage-sensitive port charges as Z-Tel proposed. He recommended recovering them over all usage, inasmuch as the record suggested that peak busy hour usage was more closely correlated with total usage than with ports.

Verizon excepts, urging use of its 36% non-usage-sensitive/64% usage-sensitive allocation. It contends it has consistently treated switch port costs as non-usage-sensitive

and the remainder as usage-sensitive, noting that the allocation is easily administered inasmuch as port costs are separately identified by its Switching Cost Information System (SCIS). In addition, it says, that treatment is consistent with cost causation, inasmuch as the port is the only component that is needed when an access line is not being used, and every feature of the switch other than the port may require augmentation as the level of usage on a line increase. Verizon contends as well that the CLEC's purchase of all of the switching capacity associated with a port, including features and functions, is a matter of product definition that does not imply that the associated costs should be recovered through flat rates. It also disputes the Judge's reading of its Phase I presentation, contending that switch components beyond those comprising the 34% of investment said by the Judge to be usage-sensitive are, in fact, usage-sensitive.

AT&T responds that Verizon's past practice with respect to this issue is irrelevant; that the record shows the non-usage-sensitive nature of most switching costs; and that the only switching costs that are truly usage sensitive in Verizon's study are the Line CCS category, which average between 25% and 34%, depending on geographic zone, thereby demonstrating the reasonableness of the Judge's finding that 34% of switching costs are usage sensitive. AT&T urges use of that figure, rather than the 40% used in Verizon's rate recalculations; the latter figure reflected the Judge's recommendation that "no more than 40%" be assigned to usage.

WorldCom goes further in its reply, urging that switching costs be treated as entirely non-usage-sensitive and citing a decision by the Illinois Commission to that effect, reflecting an Ameritech-Illinois proposal. It disputes Verizon's complaint that the recommended rate structure produces rates that are too low, again pointing to results in other jurisdictions. Renewing the arguments for regarding switching costs as non-usage-sensitive, WorldCom suggests that Verizon's switch cost model had been designed to show the contrary. Finally, it argues that usage-sensitive pricing of unbundled

switching undermines fair competition by requiring CLECs to confront a rate structure different from the non-usage-sensitive way in which Verizon incurs its costs.

The Judge fully explained how his recommendation was grounded in the record and why it is reasonable to structure switching rates on the premise that no more than 40% of switching costs are usage-sensitive. The arguments on exceptions provide no compelling reason for modifying that adjustment in concept, and both Verizon's exception and WorldCom's request to move to flat rates are denied. But we are persuaded by AT&T's argument that the proportion of switching costs treated as usage-sensitive should be reduced from 40% to 34% and that the remaining 66% should be treated as non-usage-sensitive. That was the allocation in the study cited by the Judge, and there is no reason to depart from it. AT&T's exception to that effect is granted.

2. Calculation of Usage Sensitive Rates

a. Minutes of Use

Verizon calculated usage sensitive prices in a manner understood by other parties and the Judge to involve the spreading of switch investment over the 251 business days in a year, on the premise that the switch must be designed to handle peak traffic and peak traffic is realized only on business days. Z-Tel advocated spreading the investment over 365 calendar days. The Judge saw a need to take account of weekend usage but also to recognize its lower volume and therefore recommended spreading the costs over 308 days a year, a figure derived by treating each weekend day as one-half of a day; he noted that WorldCom's witness had offered such a proposal as well.

Verizon excepts, contending that the Judge's adjustment, unnecessary in principle, had the effect of imputing an unreasonably high number of minutes of use and a corresponding reduction in usage rates. It explains, in some detail, that it derived its per-MOU switch usage costs by dividing total usage-sensitive investment by busy hour MOUs, applying various loadings to the investment per busy-hour MOU,

and then applying a factor that converts the cost per busy-hour MOU to cost per MOU. The conversion factor is derived by dividing the ratio of busy-hour MOUs to total MOUs in a typical business day by 251, the number of business days in a year. It is that calculation alone that uses the figure of 251, and changing it to 365 or to 308 would require other, corresponding adjustments as well to ensure consistency. To state the matter differently, Verizon disavows any assumption that usage-sensitive costs should be spread only over business day MOUs and agrees that the usage rate must reflect the ratio of total usage sensitive costs to total billable MOUs; it claims to have used the number of business days only in properly calculating that ratio.

In addition, Verizon calculates that the recommended decision's figures imply 338 billion annual minutes of use, in contrast to the 275 billion MOUs implied by its own analysis. It contends its figure is supported by actual data for the year 2000, showing 280 billion Dial Equipment Minutes (DEMs), and it notes, by way of comparison, that the HAI Model input was only about 240 billion DEMs, based on 1998 data. Anticipating an objection to its reliance on data for 2000, it argues that if a higher projected figure were to be used for "forward-looking" purposes, switching investment would have to be increased as well.

In response, AT&T, WorldCom, and Z-Tel dispute Verizon's interpretation of its calculations and its reference to actual data. WorldCom and Z-Tel argue, with algebraic or arithmetic demonstration, that Verizon's computations fail to spread switching costs over all minutes of use. All three parties object to Verizon's reference to actual data, arguing

that it is irrelevant for TELRIC analysis.⁶⁹ Verizon disputes that premise, contending, among other things, that a TELRIC analysis must be based on current demand.

As argued on exceptions, this issue poses two separate though related questions: whether the Judge's adjustment was proper in theory; and whether, even if arguably sound in theory, it absurdly implies far too many minutes of use. On the theoretical point, Verizon correctly states that "the usage rate must be based on the ratio of total TS cost to total billable MOUs, whenever those MOUs occur. The issue is how properly to calculate that ratio."⁷⁰ But the Judge found, and WorldCom's and Z-Tel's arguments on exceptions confirm, that Verizon's calculations do not calculate that ratio properly and have the effect, Verizon's arguments to the contrary notwithstanding, of spreading switching costs only over business day MOUs, not total MOUs.⁷¹

Verizon objects as well that the Judge's adjustment implies a number of MOUs far in excess of the current demand, to which TELRIC requires us to refer. As a threshold matter, the discrepancy may be not be due entirely (or even in large part) to the Judge's adjustment and may be caused by other aspects of Verizon's calculations. More fundamentally, and as Verizon itself argues persuasively in the context of loop costs, discussed below, proper treatment of "current demand" has to

⁶⁹ The portions of the reply briefs on exceptions containing this argument are among those Verizon challenges in its July 18 motion; it asks us to allow its sur-reply to this argument because it "did not anticipate that the CLECs would take this tack, and we thus have not yet had an occasion to address this argument in our briefs." (Verizon's motion, p. 2). That a reply brief on exceptions presents an unanticipated response to an argument made on exceptions hardly seems to require allowing a sur-reply; nonetheless, in the interest of a full airing of the issue, we have considered Verizon's submission.

⁷⁰ Verizon's Brief on Exceptions, p. 20.

⁷¹ See, in particular, the demonstration at Z-Tel's Reply Brief on exceptions, attachment A. Additional calculations tending to confirm Z-Tel's result are set forth in Appendix B.

recognize "ultimate demand." The system must be sized in that manner to avoid lack of capacity, and rates must then be set, in fairness to both present and future customers, on a premise of levelized usage somewhere between "current" and "ultimate" levels. As discussed below, we do that explicitly in the loop context, through various adjustments related to demand level and fill factor; and it is hardly surprising, and certainly not evidence of error, that the results we reach on switching rates do so implicitly. Verizon suggests that the larger number of MOUs may imply a switching network larger than the one it costed out; but it is important to recognize that the network is sized primarily on the basis of peak busy hour demand, which is unaffected by the Judge's adjustment. The adjustment applies only to the mechanism for spreading the costs of meeting that demand over the number of MOUs throughout the year. For all these reasons, we are satisfied that the Judge's resolution of this issue was reasonable, and Verizon's exception is denied.

b. Time-of-Day Rates

In calculating its switching rates, Verizon also applied time-of-day adjustments that Z-Tel regarded as arbitrary. The Judge noted that Verizon had not responded specifically to Z-Tel's criticisms and invited parties to address the time-of-day adjustments on exceptions.

Z-Tel objects to time-of-day pricing on the grounds that a single rate is easier to deal with; that it offers no economic efficiency benefits, because the rating periods, in Z-Tel's view, are only loosely correlated with actual peaks and most local service in any event is flat rated; and that time-of-day adjustments create the illusion that the allocation of fixed switching investment is other than arbitrary. WorldCom argues to similar effect, stressing the difficulty of implementing time-of-day rates properly.

Verizon disavows some of Z-Tel's arguments but says it does not object to a rate structure without time-of-day deaveraging as long as it provides for recovery of total identified switch usage costs.

We, too, do not agree with all of Z-Tel's arguments, but we see no need to impose time-of-day pricing on the parties here.

Port Additives

"Port additives" are certain optional switching features whose costs Verizon separately calculated. AT&T contended that Verizon had not substantiated those cost claims and proposed to reduce Verizon's calculated costs by 89%, representing the proportional reduction applied by AT&T to the switch digital line port UNE to correct for AT&T's view of the proper vendor discount and EF&I factor. It suggested further that the rates be set at zero on the premise that the administrative costs of collecting them might exceed the port additive costs as so recalculated. The Judge found AT&T's proportional reduction reasonable but noted that the amount of the adjustment should be recalculated on the basis of the recommended decision's conclusions regarding switch material costs and EF&I. He considered it unlikely that the resulting rates would be too low to be worth collecting but invited the parties to consider that on exceptions.

Verizon excepts to the port additive adjustment "on the same grounds as it objects to the general switch cost adjustments that the RD would mirror in the port additive rates."⁷² It expresses doubt that rates recalculated on the basis of the Judge's adjustments would be too low to be worth collecting.

Broadview excepts, acknowledging that the recommended reduction in the port additive rates is a move in the right direction but expressing some concern about the application of any charges for port additives. It suggests that the recommended reductions in loop rates and switching rates could be offset by port additive charges imposed on UNE platform

⁷² Verizon's Brief on Exceptions, p. 22. It thus appears that Verizon does not specifically object to the concept of adjusting its port additive rates to reflect whatever adjustment might ultimately be made to switching rates.

customers. It urges that "all costs associated with UNE-P [be] carefully examined to insure that reducing one set of rate elements (i.e., switch usage rates) is not counterbalanced by an increase or additional set of new rate elements (i.e., features, port additives)." ⁷³

AT&T does not except, but submits various recalculations of the port additive rate, noting, among other things, that adoption of the Judge's recommendations on switching costs (to which AT&T excepts, for the reasons described above) results in a 44% reduction in Verizon's claimed port additive costs.

Verizon responds that Broadview offers no good reason for disallowing the charges, noting that the purpose of the proceeding is to set rates on the basis of its costs, not to ensure particular gains or losses to particular players. It adds that AT&T's recalculations treat the switching EF&I factor erroneously.

Broadview's exception is denied, for the reasons properly noted by Verizon. AT&T's recalculation is moot, given the further recalculations required by this order.

Tandem Switching

The Judge recommended that tandem switch rates be reduced by the same percentage as local switch rates, plus an additional 10% reduction to recognize Verizon's failure to explain why it assumed that the vast majority of its tandem switches would be purchased from one of its two vendors. (In the context of end-office switches, Verizon had successfully defended its premise of an equal mix.) Verizon notes that its exceptions with respect to local switch costs apply here as well.

Although Verizon objects to the reductions recommended by the Judge, it does not suggest that tandem switch rates should be treated differently from local, and there is no reason

⁷³ Broadview's Brief on Exceptions, unnumbered third page.

to do so. Tandem switch rates should be reduced from the level proposed by Verizon in the manner recommended by the Judge.

Refunds

Because of the uncertainty regarding vendor discounts and the associated switching costs, the switching rates set in the First Elements Proceeding were left temporary, subject to refund or reparation. In its brief to the Judge, AT&T urged us to require Verizon "to refund all switching rates paid by CLECs in excess of Verizon's forward-looking economic costs for switching retroactive to April 1, 1997."⁷⁴ Noting that AT&T had offered no argument in support of its request and that Verizon had not addressed the issue in brief at all, the Judge asked the parties to consider further on exceptions whether we should exercise our discretion to require refunds in the event the temporary rates were reduced.

On exceptions, AT&T again urges refunds, citing the substantial reduction in switching rates recommended by the Judge (which, it claims, would be even greater if rates were set on a proper TELRIC basis) and the consequent overpayment by CLECs to Verizon during the period the temporary rates have been in effect. Renewing a frequently advanced claim, it attributes these overpayments to Verizon's alleged "material misrepresentation of fact on new switch discounts" in Phase 1, and it urges us to "make AT&T partially whole for those vast anti-competitive overpayments" by ordering refunds retroactive to July 1, 2000.⁷⁵

Z-Tel and Met-Tel also urge refunds. Z-Tel asks that the refunds be retroactive at least to September 30, 1998, the date we put the parties on notice we were aware of errors in Verizon's Phase 1 filing. It acknowledges our finding, reiterated by the Judge, that Verizon's errors in Phase 1 were

⁷⁴ AT&T's Initial Brief, p. 80.

⁷⁵ AT&T's Brief on Exceptions, pp. 15-16. As Verizon notes in reply, AT&T does not explain why it modifies its position on exceptions and requests refunds back only to July 1, 2000 rather than to April 1, 1997.

likely careless rather than deliberate but it asserts that, in any event, the errors "were clearly made by Verizon, and Verizon alone should bear the cost of rectifying [them], particularly when considering the magnitude of the overpayments. . . . It is entirely unreasonable to require Z-Tel to forgo refunds of the millions of dollars overpaid solely as a result of Verizon's own carelessness (or recklessness and malfeasance)."⁷⁶ Z-Tel urges that the refunds be paid in cash with interest at 12.6%, the current yield on B2/B bonds. Anticipating a possible argument that the errors at issue were not responsible for the entire difference between the temporary rates and those set here, Z-Tel asserts that the benefits of identifying the portion of the difference attributable to the errors would be outweighed by the difficulty of performing the exercise. In the event such an attempt were made, however, Z-Tel would urge that the refund incorporate at a minimum the effects of Verizon's alleged errors in calculating the switch discount and in using 251 as the number of days over which switching costs should be spread. Finally, Z-Tel favors retroactive adjustment of Verizon's reciprocal compensation rates, inasmuch as the switching rate is a component of the reciprocal compensation rate.⁷⁷ Verizon responds, among other things, that any refund of reciprocal compensation payments should be mutual, encompassing those paid by Verizon as well as those received by it.

Met-Tel disputes the premise that refunds are discretionary, contending that both New York law and the Telecommunications Act of 1996 require refunds here. It adds that even if we conclude that refunds in general are a matter of discretion, they would be required in any instance where an

⁷⁶ Z-Tel's Brief on Exceptions, p. 13.

⁷⁷ "Reciprocal Compensation" refers to an arrangement between two local exchange carriers in which each compensates the other for the transport and termination on the second carrier's network facilities of calls originating on the first carrier's facilities. Under present arrangements, it consists of mutual reimbursement of termination costs; the rates are set on a TELRIC basis, with reference to Verizon's transport and switching costs.

interconnection agreement between Verizon and the CLEC provide for a true-up. It suggests a procedure for determining the amount of refunds and urges that they be retroactive to April 1, 1997. Verizon responds that the one New York case cited by MetTel for the premise that refunds are mandatory in fact required reparations, to avoid confiscating a utility's property; that the 1996 Act does not address the subject of refunds; and that the interpretation of particular interconnection agreements is beyond the scope of this case.

In its own brief on exceptions, Verizon objects to any refund requirement. As a threshold matter, it suggests we lacked the power to set temporary rates in the circumstances of the First Elements Proceeding, which did not grow out of a utility request for a rate increase or satisfy other asserted requirements for temporary rates. As for refunds themselves, it maintains, like Met-Tel, that interconnection agreements containing pertinent provisions would govern. Beyond that, it contends refunds--a matter within our discretion--would be inappropriate here, inasmuch as the Judge's recommendations rely on cost study inputs, switching contracts, analyses, and FCC determinations post-dating the setting of temporary rates in May 1997. To order refunds, it suggests, would imply, improperly, that the factual premise for the rates recommended by the Judge existed then. According to Verizon, "there is simply no way of determining what rate would have been set in 1997 had the Commission been fully informed as to the discounts in effect at that time."⁷⁸ Finally, Verizon urges that if refunds are ordered, they apply as well to reciprocal compensation payments made by Verizon that were based on switching costs.

In response, AT&T suggests Verizon's objection to the setting of temporary rates is untimely, since the temporary rates were set four years ago and their temporary status was confirmed three years ago. It denies we lacked authority to set temporary rates here, arguing that Verizon reads the statute too narrowly. It points as well to Verizon's assertion, in a brief

⁷⁸ Verizon's Brief on Exceptions, p. 24.

to the court reviewing its FCC's §271 determination, that concerns about switching rates were moot because the rates were temporary and subject to refund if ultimately found excessive.⁷⁹

WorldCom also opposes refunds, in view of "the length of time that the current rates have been in effect, the potential billing imbroglios [growing out of the complicated accounting issues that would be posed in connection with refunds], and the potential for market-impacting effects that the Commission did not intend when it ordered the current rates to remain temporary."⁸⁰ If refunds were ordered, WorldCom would limit them to those parties who specifically sought them in their briefs.

Verizon's suggestion that we lack the authority to require refunds here is untimely, inconsistent with positions it has taken elsewhere, and substantively in error. These rates were made temporary when set, and that status was confirmed more than three years ago, when we said that "because the new evidence on switching costs changes the state of the [Phase 1] record, we will direct that rates that include switching costs be kept temporary, subject to refund and reparations, until we evaluate this evidence and review the switching costs in the [present] proceeding."⁸¹ Having failed to press a timely challenge to our authority to impose that condition on the rates then set, Verizon is barred from doing so now.⁸²

In addition, Verizon itself has acknowledged and explicitly relied on the temporary and refundable status of these rates in defending against its competitors' motion for a stay of the FCC's decision granting it §271 approval. As AT&T

⁷⁹ AT&T's Reply Brief on Exceptions, pp. 29-30.

⁸⁰ WorldCom's Reply Brief on Exceptions, p. 29.

⁸¹ First Network Elements Proceeding, Order Concerning Petition for Reconsideration of Phase 1 Compliance Filing (issued November 6, 1998), p. 7 (emphasis supplied); a similar statement appears at Order Denying Motion to Reopen Phase 1 and Instituting New Proceeding (issued September 30, 1998), p. 12.

⁸² See PSC v. Rochester Tel. Corp., 55 N.Y.2d 320 (1982).

points out, Verizon successfully argued to the United States Court of Appeals for the District of Columbia Circuit that there could be no irreparable injury associated with allegedly excessive switching rates, inasmuch as the rates would be subject to refund if proven to be excessive.⁸³ On that basis as well, Verizon cannot now be heard to challenge our decision to make these rates temporary.

Finally, Verizon's arguments against our authority are substantively flawed. It argues that the sources of our statutory authority to set temporary rates are inapplicable to the present case: PSL §§113(1) and 97(1) apply, in its view, only where the utility seeks a rate increase, which Verizon did not do here; PSL §113(2) deals with situations in which a utility receives a refund of amounts it had paid (such as taxes); and PSL §114 allows temporary rates pending the conclusion of a proceeding, but these rates have remained temporary long after the conclusion of Phase 1.⁸⁴

Verizon reads our authority too narrowly. PSL §97(1) gives us broad authority to change rates "upon such terms, conditions or safeguards as [we] may prescribe," and it goes on to authorize temporary changes in rates. It is not limited to proceedings instituted by a utility filing, and, together with §§113(1) and 114, it establishes a comprehensive statutory structure that permits us to act promptly to set rates subject to later refund, reparation, or recoupment, as circumstances may warrant.⁸⁵ In this instance the circumstances so warranted: UNE rates needed to be set promptly; there were doubts about the record on the basis of which we were acting; and the best way to act promptly while protecting the interests of all parties was

⁸³ AT&T's Reply Brief on Exceptions, pp. 29-30, citing Verizon's Brief in Opposition to AT&T's and Covad's Emergency Motion for a Stay, p. 14, fn. 12.

⁸⁴ Verizon's Brief on Exceptions, p. 23, fn. 56.

⁸⁵ The need for and breadth of that authority was recognized even before it was expanded by the enactment of §§113 and 114. See City of New York v. New York Tel. Co., 115 Misc. 262 (Sup. Ct., New York Spec. Term, 1921).

to set temporary rates subject to refund or reparation once the situation was further clarified. We clearly described what we were doing, and, as noted, no party has until now questioned our authority to do so.

That we have authority to direct refunds here, accordingly, is clear. Less certain, at this point, is whether and how we should exercise our considerable discretion over the use of that authority. In view of the many computational and other uncertainties, including the possible need for additional information on minutes-of-use, we are reserving judgment on the issue for now, and we encourage the parties to pursue a joint proposal for resolving the matter. If they are unable to reach agreement on a joint proposal, we will decide the matter after requesting and reviewing the additional information that may be needed.

INVESTMENT LOADINGS

In an early step of its cost analysis, Verizon applied to the material cost of its investment various investment loading factors to generate a total installed cost that includes engineering, furnishing and installation (EF&I) costs; land and building (L&B) costs; and power supply costs. Verizon, AT&T, and the CLEC Coalition except to various aspects of the recommended decision's treatment of the land and building factor, but before turning to those it is necessary to note two calculation matters raised by Verizon.

First, in connection with his adjustment to the switch EF&I factor, the Judge recognized that if the level of investment is reduced, the factor percentage level must be increased in order to recover the same level of expenses. Verizon notes the Judge's recognition of that point, and excepts to the recommended decision's failure to make similar adjustments to other investment loading factors as a corollary to its reduction in the level of material costs.

Verizon's point, to which no party responds,⁸⁶ is well taken. The loading percentages will be adjusted accordingly.

Second, in its adjustments to ensure that the L&B factor avoided double recovery of central office space used by collocators and separately paid for, the recommended decision estimated that 2.5% of Verizon's central office space would be used for collocation. (Verizon's estimate was 1.019%; the CLEC Coalition's estimate was 3.2616%.) Verizon notes on exceptions that the workpapers accompanying the recommended decision's rate calculations treated the 2.5% figure as a downward adjustment to the land and building factor itself, and it presents alternative calculations correcting that error. Verizon's point, to which no party responds, is well taken and the correction will be made.

Land and Building Investment Loading Factor

Verizon adjusted its initially calculated land and building factor to correct a number of errors identified by other parties. The result of these adjustments turned out to be an increase in loop costs instead of the anticipated decrease, and WorldCom charged that Verizon had produced these results by fundamentally changing its costing method. Verizon defended its calculations, arguing, among other things, that the increased loop costs were offset, via a reduced land and building factor, in the land and building costs recovered through rates for other UNEs; overall, total recovered L&B costs did not increase.

The Judge recommended no adjustment, finding Verizon's step-by-step explanation of its calculations reasonable; but he added that his conclusion "rests in large part on Verizon's representation that total L&B costs recovered through UNE rates will not be increased, and that the increased loop costs will be offset by reduced recovery of L&B expense through rates for

⁸⁶ The CLEC Coalition uses the opportunity to reiterate its opposition to the FLC (defined and discussed below and implicated in the calculation adjustments called for by Verizon) but takes no position on the adjustments themselves.

other UNEs."⁸⁷ Verizon had said that it would recalculate those UNE rates as part of its compliance filing, but the Judge directed it to do so in its brief on exceptions and to demonstrate that the reductions in other UNE rates were adequate to avoid any double count.

Verizon includes, with its brief on exceptions, calculations said to provide the required demonstration. It contends that L&B investment (net of land and buildings dedicated to administrative support) comes to approximately \$1.36 billion, and that application of its proposed L&B factor to the UNE rates recommended in the recommended decision will recover only \$1.32 billion. Accordingly, it says, there is no double recovery. Verizon recognizes that its initial filing in this proceeding recovered only about \$900 million of L&B costs, but it attributes that to the errors corrected in its rebuttal testimony, arguing that the measure of double recovery should be the total forward-looking, non-administrative L&B cost of \$1.36 billion.

AT&T responds that Verizon's calculation confirms the presence of a substantial increase in claimed land and building costs and urges disallowance of the \$432 million difference between the costs here claimed and the \$900 million initially sought. To Verizon's claim to have shown the absence of any double count, AT&T responds that the Judge did not refer to a "double count" but directed Verizon to show that "total L&B costs recovered through UNE rates will not be increased," a showing it has failed to make.

Although AT&T in its reply to exceptions emphasizes the concern over a net increase in costs, the double-count question figures prominently as well: the Judge concluded his direction to Verizon by requiring it to "demonstrate . . . that the reductions in [rates for other UNEs] are adequate to avoid any double count," and AT&T, in its own brief on exceptions, reserved the right to pursue the matter further "after having an opportunity to review Verizon's attempt to comply with the

⁸⁷ R.D., p. 109.

directive of the RD that it demonstrate no double recovery of costs."⁸⁸ The Judge assumed, in effect, that any increase in total L&B costs would be tantamount to a double count, inasmuch as all L&B costs had already been fully captured before the adjustments that initiated this dispute. Although the parties now portray the two issues--double count and overall increase--as distinct, each stressing one to the exclusion of the other, the Judge regarded them as identical.

In any event, what Verizon has shown is that it reduced the L&B factor as anticipated, but that the application of that reduced factor to additional RT investment (whose costs had previously been recovered directly) produces, without double count, an overall increase in total L&B costs recovered by applying the L&B loading factor. This appears to contradict its initial claim, which the Judge had asked it to substantiate, that "the increase in loop costs that was noted in WorldCom's [initial] brief [to the Judge], and that resulted from the application of the (restated) L&B factor to RT equipment investment, was not an increase in the total L&B costs that Verizon would recover through UNE rates. Rather, it was offset by the reduction in the L&B factor itself and the consequent reduction in the L&B costs that would be recovered through rates for other UNEs, such as local switching."⁸⁹

According to our Staff's calculations, the three revisions made by Verizon to eliminate the double count had the net effect of increasing overall UNE costs by \$60 million (loop costs went up by \$73 million but other UNE costs declined by only \$13 million). Verizon may have shown the absence of any double count, but it still has not explained why collecting the L&B costs at issue through the L&B loading factor rather than directly has resulted in an overall increase in UNE costs. Accordingly, we will apply only the adjustment to eliminate direct recovery of the L&B costs at issue; and rates should be

⁸⁸ AT&T's Brief on Exceptions, p. 38.

⁸⁹ Verizon's Reply Brief, p. 15 (emphasis in original).

set on the premise of total L&B costs of about \$900 million,⁹⁰ consistent with Verizon's initial claim.

Calculation of the L&B Factor

Noting the Judge's discussion of the application of the FLC (discussed above) in calculating the land and building factor, the CLEC Coalition argues that a double count results if the FLC is applied together with another adjustment, which it refers to as the "TPI adjustment" and Verizon terms the "Current Cost/Booked Cost" (CC/BC) ratio. The CLEC Coalition favors elimination of the FLC generally, but if that argument did not prevail, it would urge that the TPI adjustment be eliminated to avoid the double count.

Verizon replies that the two adjustments do not overlap. The CC/BC ratio, it explains, applies current prices to the embedded equipment reflected on Verizon's books. The FLC reflects ubiquitous deployment of forward looking technology, as required by TELRIC. The two together, Verizon asserts, convert book investments to forward-looking investments.

Verizon's response is persuasive, and the CLEC Coalition's exception is denied.

ANNUAL COST FACTORS

Introduction

As already mentioned, Verizon used annual cost factors to convert TELRIC investments into annual costs for UNEs and to develop nonrecurring charges. The factors are expressed as ratios whose numerator is pertinent expenses and whose denominator may be relevant investments, other expenses, or revenues. Six of the eight ACFs use an investment denominator; they are identified as (1) the depreciation ACF, (2) the return, interest, and federal income tax (RIT) ACF, (3) the ad valorem tax ACF, (4) the network ACF, (5) the wholesale marketing ACF, and (6) the other support ACF. The common overhead ACF is an

⁹⁰ The figure to be used is further specified and explained in Appendix C.

expense-to-expense ratio used to identify and allocate common overhead expenses, special pension enhancement payments, and savings associated with the Bell Atlantic/NYNEX merger. Finally, the gross revenue loading ACF, expressed as an expense-to-revenue ratio, allocates uncollectibles and Commission expenses.

To develop its ACFs, Verizon began with 1998 expenses, which it claimed to have adjusted (from \$7.866 billion overall to \$5.316 billion overall) to insure compliance with TELRIC, to reflect decisions in the First Elements Proceeding, and to capture an assumed level of productivity and savings. In addition, it asserted, the ACFs reflect no growth in costs since 1998, thereby sparing UNE customers the effects of inflation. Verizon contended that "the ACFs provide customers with the benefits of productivity gains, even when specific programs have not been identified to achieve these gains, while insulating customers from cost increases, even when the increases are known and certain."⁹¹

Verizon maintained that its ACFs had been developed in a manner largely consistent with that used to develop carrying charge factors (CCFs) in the First Proceeding.⁹² It argued as well that substantial reductions in the expenses captured by the ACFs, as urged by some parties, would unlawfully and improperly deny it the opportunity to recover the costs it actually expects to incur in providing UNEs, thereby violating the statutory mandate that rates be just and reasonable and the FCC's requirement that UNE rates reflect "the incremental costs that incumbents actually expect to incur in making network elements available to new entrants."⁹³ Verizon explained as well that it applied three generic adjustments to its ACF calculations "in order to insure that the ACFs used in this proceeding accurately

⁹¹ Verizon's Initial Brief, p. 39.

⁹² The differences between the two processes are described at Tr. 2,366-2,369; they are discussed here only to the extent they are controversial.

⁹³ Local Competition Order, ¶685.

reflected TELRIC assumptions."⁹⁴ The adjustments were said to exclude retail costs, account for inflation and productivity, and apply a forward-looking-to-current conversion.

The Judge resolved a series of objections to the ACFs. They are discussed here only to the extent they are raised by parties on exceptions.⁹⁵ Following the format of the recommended decision, we consider cost of capital issues separately as the next major heading.

Productivity

1. In General

In estimating the expenses to be allocated through the various ACFs, Verizon assumed productivity savings of 2% above inflation for network related expenses (primarily maintenance) and 10% above inflation for non-network-related expenses; it asserted that those were the figures we applied in Phase 1 of the First Elements Proceeding and elsewhere. The CLEC Coalition argued that application of the concepts we used in the First Proceeding required a substantial increase in imputed productivity. It argued that the 10% figure applied in the First Proceeding represented an annual rate of 5% applied over two years (1995, the base year for the data, to 1997, the year the prices were to take effect). Here, 1998 data are being used and the rates were expected to take effect in 2001, suggesting a productivity factor of at least 15% (5% over three years) or even 20% (if a fourth year is recognized).

The Judge regarded as insufficiently ambitious the 3.33% annual productivity figure implied by Verizon's proposal to apply a 10% adjustment over a three-year period but seriously questioned as well the 5% and higher annual productivity figures

⁹⁴ Verizon's Initial Brief, p. 41.

⁹⁵ In several instances, parties allege errors in one another's rate calculations or in those prepared by Staff and appended to the recommended decision. Inasmuch as all rates require recalculation in light of our decisions, those allegations are discussed only in the event they raise substantive issues requiring resolution.

advocated by the CLEC Coalition. Noting, on the basis of Verizon's own presentation, that the average productivity factor used by regulators in price cap proceedings implied an annual productivity level of about 3.9%, the Judge applied that annual figure over a period somewhat in excess of three years and recommended an overall productivity adjustment of 12%. For maintenance, he recommended a productivity figure of 3%, using annual figures implicit in the Phase 1 adjustment but recognizing the longer interval in the present case. Parties on both sides of the issue except.

Verizon maintains there is no record basis for the Judge's recommendations. Noting that its expenses have actually increased, it argues that the Judge misread the precedents that he relied on for imputing, in the absence of evidence that they are achievable, productivity adjustments greater than those proposed by Verizon itself. It contends, among other things, that the annual productivity figures cited in the Phase 1 Opinion and relied on by the Judge had been used only to calculate the productivity improvements implied by the price reductions in Verizon's Performance Regulatory Plan (PRP) and did not represent productivity gains that were either achieved or achievable. It argues as well that the Judge failed to recognize the need to take account of inflation, estimates of which are included in the productivity figures cited by the Judge. Disputing the Judge's characterization of its 3.33% annual productivity improvement as too low, it explains that if inflation is taken into account, the annual figure becomes 5.88% in real terms, exceeding the productivity figures cited by the recommended decision. Finally, Verizon regards the productivity adjustment as particularly unreasonable given the Judge's recommendations that rates be adjusted to reflect savings associated with the Bell Atlantic/GTE merger and that no allowance be made for special pension enhancement (SPE) expenses. Arguing that mergers and workforce restructurings are two important ways to achieve productivity growth, Verizon charges "it is an unreasonable double count to increase the level of assumed productivity, disallow SPE costs, which must be

incurred to achieve these assumed gains, and then separately add on merger savings."⁹⁶

AT&T and the CLEC Coalition respond that there is ample record basis for the Judge's recommendation, pointing to his discussion of the evidence submitted on both sides. They contend, among other things, that the recommendation is fully consistent with the decision in Phase 1, which Verizon itself relied on, and extends the logic of that decision to reflect the longer interval here between base year and rate year. They are untroubled by the gap between allowed and actual expenses, noting that actual expenses are not the standard used in a TELRIC analysis.

In its own exception, the CLEC Coalition maintains that the 3.95% annual productivity factor referred to by the Judge is too low. It argues that the implicit productivity factor in price cap proceedings in states formerly served by NYNEX is higher than the overall average in the survey submitted by Verizon and that that differential should be taken account of here. It also urges, in view of the timing of the new rates, that four years of productivity be recognized rather than three.

Verizon responds that the CLEC Coalition misstates the data with respect to other price cap proceedings and suggests that the longer interval referred to by the Coalition means, in effect, that Verizon will have to absorb even more unrecovered cost increases.

A productivity adjustment captures, in regulated rates, a reasonable degree of productivity improvement beyond what may be reflected through more specific adjustments. In applying it, we recognize that the specific adjustments do not exhaust the available cost savings, but we must take care as well that the savings not be unfairly overstated or double counted. As described below, we will reflect in the rates set

⁹⁶ Verizon's Brief on Exceptions, p. 62. Special pension enhancement expenses refer to certain costs associated with offering enhanced retirement benefits to its employees in order to reduce the workforce; they are discussed further below.

here a placeholder estimate of savings associated with the Bell Atlantic/GTE merger, and recognition of those specific savings warrants tempering the Judge's general productivity adjustment, which is, again, simply a surrogate for specific savings that cannot be quantified. Verizon's exception on this point is granted, and general productivity will be reflected at the 10% and 2% rates proposed by Verizon.

2. Copper Distribution Facilities

The CLEC Coalition excepts as well to the Judge's rejection of its proposal to apply the higher, non-maintenance productivity adjustment to maintenance related to copper distribution facilities. The CLEC Coalition had contended that very little copper distribution plant is turning over and that the higher adjustment "properly reflects the improvement in maintaining whatever copper plant may be in place."⁹⁷ The Judge was persuaded by Verizon's rebuttal and concluded that the premise of no plant turnover had not been established. On exceptions, the CLEC Coalition concedes the Judge's point with respect to copper feeder facilities but disputes it with regard to copper distribution facilities. It therefore urges application of the overall productivity factor to maintenance expenses related to copper distribution facilities.

Verizon responds that copper distribution facilities are, in fact, being phased out; that there is no basis for a reduction in these costs beyond that effected by the CRAF, discussed below; and that, in any event, the pertinent accounts include both distribution and feeder facilities, precluding application of the adjustment to one but not the other.

Verizon's response is persuasive; the exception is denied.

Forward-Looking-to-Current Factor

According to Verizon, CCFs were traditionally calculated by finding the relationship between current expense

⁹⁷ CLEC Coalition's Initial Brief, p. 22.

and current investment and then applying the resulting ratio to convert the investment into customer charges that permit recovery of both investment and expenses. In a TELRIC context, the numerator of this factor--current expense--is significantly reduced to reflect forward-looking TELRIC assumptions, and unless the denominator is likewise reduced, the correspondingly lower factor, when applied to forward-looking TELRIC investment, will underrecover expenses to a degree not contemplated by the TELRIC method. Reducing the denominator is impractical, inasmuch as TELRIC investments cannot be determined before the end of the study process. Accordingly, Verizon proposed an adjustment, termed the forward-looking-to-current (FLC) factor, that would divide the ACF by .70, representing the approximate ratio of total incremental costs to the current level of those costs as calculated in the First Proceeding and in proceedings in Massachusetts and Pennsylvania.⁹⁸ It applied the FLC factor to the network, wholesale marketing, other support, and common overhead ACFs--those in which a reduction in investment could not be assumed to imply a comparable reduction in expenses. It did not apply the FLC to the depreciation, RIT, and ad valorem ACFs, which are directly related to investment levels, or to the gross revenue ACF, which directly reflects the level of expenses. Verizon noted that even with the FLC applied, its studies reflect only \$5.316 billion in recognizable costs, in contrast to its claimed actual costs of \$7.571 billion.

The FLC drew the fire of numerous parties, most of whom saw it, in AT&T's words, as "nothing more than a poorly disguised attempt by Verizon to recoup its embedded, inefficient operating costs. Such recovery would violate TELRIC"⁹⁹

The Judge found the FLC to be sound in concept. He reasoned that in Phase 1, the CCFs had been calculated for the most part as the ratio of historical expenses to historical

⁹⁸ Dividing the ACF by .70, of course, is the same as multiplying it by 1.43. Because the FLC is expressed as the result of the division, a smaller factor is equivalent to a higher cost.

⁹⁹ AT&T's Initial Brief, p. 47.

investment, and we were persuaded that application of that ratio to TELRIC investment would adequately capture pertinent forward-looking savings. Here, in contrast, the numerator of Verizon's proposed ACF is its forward-looking TELRIC expense yet the denominator remains historical investment; the ratio, accordingly, is lower than it would have been in Phase 1. Nevertheless, that lower ratio is applied to forward-looking TELRIC investment, "thereby in effect double counting the TELRIC adjustment, as Verizon argues. Seen in this light, the FLC does not convert TELRIC costs to embedded; it merely tries to restore a 'twice-TELRICed' cost calculation to one that recognizes TELRIC only once--as was the case initially in Phase 1."¹⁰⁰

Although he found the FLC sound in concept, the Judge adjusted it from 70% to 75%, on the basis of Verizon's estimate of TELRIC investment, submitted in response to a post-hearing question from Staff. He noted as well that "use of the FLC to avoid double counting the effects of TELRIC requires being sure that the remaining 'single count' is not understated. To that end, expense adjustments should be rigorously applied where warranted."¹⁰¹

Verizon does not except to the Judge's modification to the FLC, noting only that further adjustments are needed to reflect changes in TELRIC investment resulting from the Judge's other recommendations; it recalculates the figure as 66%. Several CLECs continue to object in concept to the FLC.

Noting the FLC's significant effect on cost factors, AT&T contends the Judge overstated the distinction between the Phase 1 CCFs and the ACFs proposed here. It argues that the forward-looking adjustments applied to the expenses forming the numerator of the ACF (and cited by the Judge as the basis for concluding that the FLC is needed to avoid any risk that the cost calculations might be "twice-TELRICed") are, for the most part, the same as the adjustments to the CCF calculation that we ordered in Phase 1. Verizon's proposed CCFs in Phase 1 used

¹⁰⁰ R.D., p. 43.

¹⁰¹ R.D., pp. 43-44.

current expense as the numerator, but the CCFs actually applied in setting rates incorporated forward-looking adjustments that we required, including the elimination of avoided retail costs, recognition of productivity improvements, elimination of special pension enhancement expenses, recognition of merger savings, and recognition of savings resulting from forward-looking plant improvements. On that basis, AT&T renews its claim that the FLC is nothing more than Verizon's effort to take back the forward-looking cost savings it has purported to offer. In its reply brief on exceptions, AT&T objects to what it considers to be Verizon's uninvited recalculation of the FLC on the basis of extra-record information.

WorldCom argues to similar effect, contending that the FLC is an improper attempt to recover embedded costs through UNE prices, in violation of TELRIC principles. The CLEC Coalition likewise objects to any FLC adjustment, adding that the adjustment, if nevertheless adopted, should be calculated on an account-specific basis. It disagrees with the Judge's observation that such specific adjustments, though desirable, would be impracticable and contends that the information needed

to apply account-specific adjustments is available from Verizon.¹⁰²

Verizon responds that the CLECs have merely restated arguments correctly rejected by the Judge, asserting that "their fulminations do nothing to bring into question the RD's finding that the adoption of a FLC is required to prevent the inherently unreasonable double counting of phantom savings."¹⁰³ It reiterates its own argument that its cost presentation included only \$5.3 billion in costs, compared with its actual 1998 costs of \$7.6 billion, and that its TELRIC investment came to \$16.5 billion, in comparison with actual investment of \$21.9 billion. It contends as well that the CLEC Coalition has

¹⁰² Z-Tel took no exception to the use of an FLC in principle but excepted broadly to the manner in which it had been calculated. It withdrew that exception in a letter dated July 6, 2001, acknowledging that it had unintentionally misstated what it regarded as the flaw in the Judge's recommendation but noting that its withdrawal of its exception should not be understood as support for the FLC. In its reply brief on exceptions (p. 6), Z-Tel argues that what it sees as an inconsistency in Verizon's position with respect to the FLC suggests we "should, at a minimum, raise the FLC to 0.975, although the evidence . . . suggests it is perhaps best to eliminate the FLC altogether." Verizon moved to strike that passage of Z-Tel's brief on the grounds that it effectively renews Z-Tel's withdrawn exception in a manner denying Verizon the opportunity to respond. Z-Tel responds that its comments, purportedly showing how an FLC could be calculated in a manner consistent with TELRIC, constitute a procedurally proper response to WorldCom's argument on exceptions that the FLC is inconsistent with TELRIC.

Z-Tel's arguments on this issue in its reply brief differ from those initially presented and withdrawn, but they do not in any event respond to Verizon's exception and they are portrayed as a response to WorldCom's exception only in Z-Tel's reply to Verizon's motion to strike. In effect, the arguments constitute a challenge to the recommended decision's endorsement and calculation of the FLC and could have been presented on exceptions, thereby allowing for response by Verizon. To allow presentation of the arguments now, especially after Z-Tel explicitly withdrew its initial exception on the point, would be unfair, and Verizon's motion to strike this portion of Z-Tel's reply brief on exceptions is granted.

¹⁰³ Verizon's Reply Brief on Exceptions, p. 32. The recommended decision, it should be noted, was concerned about the double-count but did not characterize the savings as "phantom."

not called into question the Judge's finding that an account-specific FLC would be impracticably cumbersome to compute, suggesting that if the exercise were as easy as the CLEC Coalition contends, the CLEC Coalition could have performed it in its brief on exceptions, thereby permitting Verizon to respond to the analysis.

The CLECs have not shown the FLC to be unnecessary for its stated purpose; at most their arguments imply that it should have been applied in Phase 1 as well. That it was not applied there does not preclude its use here, for it appears to be a proper methodological refinement. (Methodological refinement, of course, can raise rates as well as lower them; the test is whether the adjustment makes sense.) The general exceptions to the FLC accordingly are denied, and we reject as well the CLEC Coalition's proposal to calculate an FLC on an account-specific basis; the Judge properly found any such effort to be impracticable. That said, we reiterate the Judge's observation that "use of the FLC to avoid double counting the effects of TELRIC requires being sure that the remaining 'single count' is not understated. To that end, expense adjustments should be rigorously applied where warranted."¹⁰⁴ We have taken account of that recommendation in our decisions.

We have recalculated the FLC on the basis of our determinations today; the restated figure is 65%.

¹⁰⁴ R.D., pp. 43-44.

Removal of Retail Avoided Costs

Consistent with the premise of the FCC's UNE pricing regulations, Verizon's studies reflected the assumption that Verizon was a purely wholesale company; they sought, therefore, to remove avoidable retail costs from consideration. AT&T argued that Verizon had not gone far enough in that direction and that, among other things, it should have excluded Universal Service Fund (USF) contributions, which are assessed on the basis of retail end-user revenues and accordingly would not be incurred in a wholesale-only environment. Verizon responded that the hypothetical wholesale-only environment would likely involve changes in the USF and that it was unlikely that Verizon and other ILECs would be relieved of all responsibility for universal service. More fundamentally, Verizon pointed to the Eighth Circuit's rejection of the wholesale-only premise that underlies exclusion of USF expenses, arguing that that aspect of the court's decision had not been stayed pending Supreme Court review and that we therefore were obligated to take it into account.¹⁰⁵

The Judge adopted Verizon's retail adjustment as a placeholder, noting that AT&T had not addressed itself to the effect of the Eighth Circuit's decision on its USF adjustment and that Verizon had not presented any estimate of how the decision would affect its own figures. He noted as well that the Eighth Circuit's decision on this matter "pertained to resale rates, not UNEs. Extending it to the calculation of excluded retail costs for purposes of UNE pricing may have the benefits of consistency, but the CLEC Alliance [which had raised the issue before the Judge but did not file a brief on exceptions] presents arguments, on which judgement can here be reserved, against doing so."¹⁰⁶ The Judge accordingly invited further consideration of this issue.

¹⁰⁵ More specifically, the Eighth Circuit determined that the 1996 Act called only for removal of retail "costs that are actually avoided," a lesser amount than the "avoidable" retail costs that the FCC required be removed.

¹⁰⁶ R.D., p. 44, n. 97.

On exceptions, AT&T asserts that the TELRIC standard remains in place pending Supreme Court review of the Eighth Circuit decision and urges us to "simply ignore the most recent Eighth Circuit decision in [our] decision on all issues raised in this docket."¹⁰⁷ It sees no reason to single out retail avoided costs for special treatment, noting, as did the Judge, that the portion of the Eighth Circuit's decision at issue pertained to resale rates, not UNE prices.

Verizon, in contrast, contends it would be irresponsible to ignore the Eighth Circuit decision, which, though directed specifically to resale rates, is equally applicable to UNE pricing. It cites in this regard our statement in Phase 1 that there was no basis for distinguishing between resale rates and UNE prices for purposes of estimating the retail costs to be excluded¹⁰⁸ and that the Eighth Circuit decision accordingly is directly applicable. With specific reference to the Universal Service Fund matter, Verizon argues that the Eighth Circuit decision removes the entire premise for AT&T's adjustment, and it reiterates its argument that even without the Eighth Circuit decision, it would be unreasonable to assume that Verizon would have no USF responsibilities in a wholesale-only environment. Finally, responding to the Judge's invitation, it submits a recalculation of its avoided costs computed in a manner it sees as consistent with the Eighth Circuit decision and estimates that the adjustment would thereby be reduced by approximately \$175 million.

In its reply brief on exceptions, AT&T argues that the Eighth Circuit, in a portion of its decision not previously cited in this case, explicitly ruled that Universal Service Fund costs should be excluded from the costs of providing network elements inasmuch as they are not based on actual costs.¹⁰⁹ The

¹⁰⁷ AT&T's Brief on Exceptions, p. 31.

¹⁰⁸ Phase 1 Opinion, p. 96. It is noteworthy that in Phase 1, Verizon advocated a distinction here while AT&T opposed it.

¹⁰⁹ AT&T's Reply Brief on Exceptions, p. 84, citing Iowa Utilities Board v. FCC, 219 F. 3rd 744, 753.

Eighth Circuit accordingly did not remove the basis for AT&T's adjustment, as Verizon suggests; rather, says AT&T, it affirmed it. Verizon asks, in its post-briefing motion, that this portion of AT&T's reply brief be disregarded, inasmuch as AT&T had not raised the argument in its initial brief, where it contended only that the Eighth Circuit decision was irrelevant here. Should we deny that request, Verizon would respond that the Eighth Circuit was dealing with above-cost contributions to the USF, which Verizon agrees should not be recovered in rates and which it has not sought to recover. The point here, it says, is whether they should be again be removed in calculating retail avoided costs. Finally, AT&T objects as well to Verizon's recalculation of avoided costs, characterizing it as a "completely extra-record improper submission of what purports to be a recalculation of Verizon's entire avoided cost study."¹¹⁰ It urges that the recalculation be disregarded. Verizon responds that the recalculation was requested by the Judge.

Turning first to the procedural issue, AT&T's argument with respect to the Eighth Circuit's treatment of the USF should have been raised on exceptions, in response to the Judge's request to brief the issue. But in the interest of full consideration, we will entertain Verizon's response rather than striking the passage in AT&T's brief.

Taking account of all the arguments before us, we reject AT&T's USF adjustment as unsupported and unnecessary, if only because Verizon has already removed USF contribution from its calculations. But we also see no need to modify the retail avoided cost adjustment further in light of the Eighth Circuit, inasmuch as the portion of the decision not stayed relates to resale rather than UNEs, and a TELRIC-based decision on UNEs should continue to reflect avoidable, rather than only avoided, retail costs.

¹¹⁰ AT&T's Reply Brief on Exceptions, p. 84.

ACF Versus CCF

Verizon's ACF method, in contrast to the CCF mechanism used in the First Elements Proceeding, assigns some costs and expenses not on the basis of investment but on the basis of expenses or revenues. As a result, a portion of the common overhead ACF is assigned to non-recurring charges which, because they entail no investment, would bear no assignment of common overhead under the CCF method. The CLEC Coalition objected to this change, urging continued use of CCFs in order to avoid what it regarded as an unwarranted increase in non-recurring charges. The Judge agreed with Verizon, however, that non-recurring charges should bear a portion of the overhead costs from which they benefit, and he therefore found the ACF method for allocating costs to be reasonable.

The CLEC Coalition excepts, asserting that because common overhead costs are incurred on a recurring basis, they should not be recovered through nonrecurring charges. In addition, it contends that we have required use of CCFs in the context of collocation rates and that the applicable FCC rules require that UNE and collocation rates be calculated on the same basis. It contends further that approval of the ACF method will entail a departure, without adequate explanation, from the UNE pricing method adopted in Phase 1 of the First Proceeding.

In response, Verizon cites testimony that the existence of nonrecurring activities has a direct effect on the level of these expenses.¹¹¹ It argues further that the FCC regulations cited by the CLEC Coalition require only that both UNE rates and collocation rates be set on a TELRIC basis and do not require that the TELRIC standard be applied in the same manner to different groups of rates. In any event, Verizon adds, it has been recognized throughout the proceeding that the factors ultimately adopted in this module would apply to collocation rates as well as to UNE rates.

Verizon's response is persuasive, and the exception is denied.

¹¹¹ Tr. 3,313.

Network ACF

The network ACF "includes repair, rearrangement and testing expenses as well as testing equipment capital costs, plus plant account and general network loadings."¹¹² In calculating the factor, Verizon assumed a reduction in "R dollars," the costs associated with subscriber troubles, on the premise that such troubles would diminish with the placement of newer copper plant. It did not reduce "M dollars," attributable to rearrangements associated with customer moves, municipal requirements, and network upgrades, seeing no basis for assuming that such costs would decline.

The Judge held that Verizon had failed to refute the reasonable expectation that moves and rearrangements would be less costly in a forward-looking system. He cited, in this regard, a statement by Staff in its scoping memorandum prepared early in the proceeding as well as a press release by SBC (another regional Bell operating company) stating that new loop infrastructure "will substantially reduce the need to rearrange outside plant facilities when installing new or additional services."¹¹³ He regarded WorldCom's 50% adjustment to M dollars as unduly high, however, and recommended a 30% adjustment unless parties could show on exceptions that a different figure was warranted.

Verizon excepts, contending that despite Staff's statement in the scoping memo, Verizon's witness had shown in uncontroverted testimony that there was no technology that would permit reductions from historical levels of M dollars. It objects as well to reliance on the SBC press release, arguing that WorldCom had offered no testimony on how it was relevant and that Verizon's witnesses had shown, among other things, that projected savings such as these might not emerge. Verizon regards it as unreasonable to reject the expert testimony of its witnesses in favor of a press release discussing another company's network, insisting there is no record basis to assume

¹¹² Verizon's Initial Brief, p. 54.

¹¹³ Exhibit 393 (offered by WorldCom), p. 7.

that SBC's network is consistent with the one contemplated by Verizon's studies. Verizon particularly objects to application of the 30% adjustment to the pole and conduit accounts, which encompass items whose cost will not decline as a result of technological advances.

AT&T responds that Verizon's exception merely reiterates its conclusory testimony, regarded as inadequate by the Judge, that network reconfiguration will continue to be required even in a forward-looking network. According to AT&T, Verizon fails to respond to the Judge's observation that Verizon had not recognized the extent to which those activities might be less costly than they had been in the past. AT&T charges that Verizon's discussion of Exhibit 393 does not address the Judge's fundamental concern that Verizon had not borne its burden of proof, and it notes that Verizon likewise failed to consider whether the 30% adjustment recommended by the Judge should be replaced by some other number, insisting only that no adjustment at all would be proper. AT&T specifically disputes, as lacking any record basis, Verizon's proposal to treat poles and conduits differently.

Possible differences between SBC's network and Verizon's might well preclude reliance on SBC's experience for purposes of estimating the amount of an adjustment, but the Judge did not use the SBC statement for that purpose. Rather, he saw it as confirming the reasonable inference, already reflected in the Staff scoping memorandum, that even though forward-looking technology would not obviate network reconfiguration, it would reduce its cost. Despite its burden of proof, Verizon's effort to refute that premise pertained to the continued need for reconfiguration, which the Judge acknowledged, but not to its cost; and the Judge reasonably found that an adjustment was warranted. He conservatively regarded WorldCom's 50% adjustment as excessive and adopted a 30% figure instead, and Verizon's exception, limited to the adjustment in principle, offers no basis for any other number. Verizon does, however, provide a qualitatively persuasive basis for not applying the adjustment to pole and conduit accounts,

where there are less likely to be technological advances that reduce costs. Verizon's exception is granted to the extent that the adjustment will not be applied to poles and conduits; it is otherwise denied.

In a separate matter under this heading, WorldCom contended that the Network ACF was overstated because of a diminution in the adjustment--the copper repair adjustment factor (CRAF)--designed to eliminate recovery of expenses associated with repairing deteriorated copper plant. In the First Proceeding, the "deteriorated copper repair reduction," an important portion of the CRAF, had been set at 60%; Verizon here proposed to lower it to 35%, thereby reducing the overall CRAF from 42% to 25%. The 35% deteriorated copper repair reduction results from averaging the 60% used in the First Proceeding on the basis of a 1996 study with a new estimate of 10%. WorldCom charged the new figure lacked evidentiary support and was simply an unexplained estimate; Verizon argued that its reduction to the CRAF reflected the notion that newer plant already in good condition was less likely to experience large trouble rate improvements in the future. The Judge found that argument to make sense in concept, but he regarded Verizon's 10% estimate to be inadequately supported. Verizon had associated that figure with units that would be experiencing excellent service, and the Judge saw no basis for assuming that all equipment would have as small an improvement as the best units. In the absence of a better estimate, and in view of Verizon's burden of proof, he substituted a 25% estimate for Verizon's 10% and averaged that 25% figure with the 60% of the First Proceeding.

Verizon excepts, arguing that no party had offered testimony challenging its 10% figure and that cross-examination of its witness, who had directly pertinent expertise, reinforced its reasonableness.¹¹⁴ It denies it failed to meet its burden of proof, arguing that if the 25% figure used by the Judge had been submitted in responsive testimony, Verizon could have offered rebuttal. It recognizes that its 10% figure is based on part on

¹¹⁴ Tr. 5,272-5,287.

judgment, but it argues that the judgment "reflects the expert opinion of a witness with years of relevant experience who was willing to face cross-examination to test the reasonableness of the exercise of his judgement," and that there is nothing in the record to challenge that judgment.¹¹⁵

In response, AT&T maintains the record provides a basis for questioning the 10% figure and contends that evidence and argument submitted by several CLECs and cited by the Judge support the Judge's conclusion.¹¹⁶ It asserts that Verizon's effort to pretend the evidence is not there does not make the evidence disappear, and that the weight to be assigned to the evidence is a matter to be determined by the Judge and, ultimately, by us.

The record on this issue is not so conclusive as either side would have it. The pages of the recommended decision referred to in AT&T's reply brief on exceptions relate in large part to matters other than the specific CRAF adjustment; but the pages of the transcript cited by Verizon do not sustain its 10% figure against the criticism that a number associated with the best performing equipment should not be universally imputed. The Judge reasonably took account of that unrefuted concern in making a conservative adjustment to Verizon's figure, and Verizon's exception is denied.

Wholesale Marketing ACF

The wholesale marketing ACF captures the expenses of "advertising, product management, and customer interfacing functions."¹¹⁷ Verizon claimed to be seeking recovery here only of the costs that would be incurred in a wholesale market, but nevertheless included certain advertising expenses. Several CLECs objected, contending that there would be no need to advertise the availability of UNEs at wholesale and that

¹¹⁵ Verizon's Brief on Exceptions, p. 69.

¹¹⁶ AT&T's Reply Brief on Exceptions, pp. 78-80, citing R.D., pp. 46-48.

¹¹⁷ Verizon's Initial Brief, p. 59.

allowing advertising expense would require CLECs to pay twice for advertising--once to Verizon and once through their own advertising channels. The Judge disallowed 85% of the claimed advertising expense, noting that we had disallowed 90% in the First Elements Proceeding but that evidence on this record suggested that some wholesale advertising was now under way and warranted a reduction in the disallowance.

Verizon excepts, contending, as already discussed, that the Eighth Circuit decision precludes assuming a wholesale-only environment. In a mixed wholesale/retail TELRIC environment, Verizon continues, it would be doing the same sort of advertising it does today and, accordingly, no disallowance should be applied. Beyond that, Verizon reiterates its arguments that even in a wholesale-only environment, it would engage in market stimulation advertising, brand awareness advertising, and advertising to the CLECs themselves.

AT&T responds that Verizon is merely reiterating the arguments on advertising that the Judge found unpersuasive. It sees no record basis for Verizon's claim that as a retail/wholesale provider in a TELRIC environment it would be doing the same sort of advertising it does today. (AT&T's more general arguments on the wholesale-only issue have already been noted.)

As already explained, the Eighth Circuit's decision with respect to resale rates, though not stayed, does not require changing the assumptions applicable to UNEs. Verizon has shown no basis for departing in principle from the decision we made in the First Proceeding, and the Judge adequately tempered that result by reducing the amount of the disallowance in on the basis of evidence presented here. Verizon's exception is denied.

Common Overhead ACF

"The common overhead ACF reflects common overhead expense, SPE or equivalent expenses[,] and savings from the Bell Atlantic/NYNEX Merger."¹¹⁸ Exceptions are raised with regard to all three components.

1. Common Overhead Expenses

Common overhead expenses are those associated with activities, previously designated as general and administration (G&A) functions, including executive, planning, general accounting and finance, external relations, legal, and human relations. The recommended decision disallowed certain expenses related to Y2K concerns, rejecting as unproven Verizon's argument that the incurrence of those costs merely served to defer other costs and that no disallowance accordingly was warranted.

Verizon excepts, contending that the only relevant evidence was offered by its witness, who had day-to-day familiarity with the pertinent budgets and testified that the Y2K costs only deferred the incurrence of others. AT&T responds that the Judge properly found that Verizon failed to prove its case, inasmuch as Verizon had "offered no analysis or quantification to support its witness's creative assertion" and that "the fact that Verizon's witness asserted a proposition does not mean that the finder of facts has no choice but to accept that proposition."¹¹⁹

Verizon's argument on exceptions simply refers to its witness's testimony, which the Judge found inadequate. Y2K costs are inherently a one-time event, and Verizon has not disproven the reasonable premise that they should be disallowed as such. Its exception is denied.

¹¹⁸ Verizon's Initial Brief, p. 63.

¹¹⁹ AT&T's Reply Brief on Exceptions, p. 69

2. Special Pension Enhancement Expense

Special Pension Enhancement expenses are those associated with Verizon's offering of enhanced retirement benefits in order to reduce its workforce. In Phase 3 of the First Proceeding, we denied Verizon's request to recover some \$387 million of such costs. We cited procedural grounds, related to the timeliness of the claim, and substantive grounds, including, among other things, the need to recognize possible offsetting savings. We nevertheless authorized renewed consideration of the issue in this proceeding, albeit it on a prospective basis only; and we added, in response to AT&T's request for rehearing, that Verizon bears the burden of showing any allowance to be procedurally and substantively proper.¹²⁰ In the present proceeding, Verizon seeks to recover some \$400 million of SPE, a figure based on the average of 1998-1999 SPE expenses, adjusted to remove avoidable retail costs. It contends, in essence, that the productivity reflected in its cost studies can be achieved only if it continues to restructure its workforce in a manner requiring the expenditure of SPE costs.

Various CLECs argued, among other things, that these costs are incurred to overcome the effects of past inefficiencies, that they would not be incurred by an efficient forward-looking company, and that allowing them would contravene TELRIC. The Judge agreed with Verizon that early retirement incentive costs could be incurred in a TELRIC environment and held that the costs to be allowed here, if any, "should reflect the normal level of costs that Verizon could be expected to incur in that environment."¹²¹ He found, however, that Verizon had not borne its burden of proving that its claimed \$400 million of costs would be incurred in a forward-looking environment; that there was no basis on the record for

¹²⁰ Phase 3 Opinion, pp. 21-22; Phase 3 Rehearing Opinion, pp. 6-7. A full discussion of the issue's background appears in the Phase 3 Recommended Decision (issued October 2, 1998), pp. 18-20.

¹²¹ R.D., p. 59.

identifying some lower amount; and that recovery of SPE expenses should again be disallowed. In reaching that conclusion, he cited evidence¹²² that there had been considerable variation in annual SPE costs between 1994 and 1999, calling into question Verizon's reliance, in forming its estimate, on the costs incurred in 1998 and 1999, the second and third highest of the six years. He noted as well that the six years encompass two mergers, which could be expected to involve unusual levels of early retirement, and the transition from monopoly to competition, which could also be expected to involve an unusual degree of workforce reduction. Finally, he noted again that allowance of the FLC adjustment requires special diligence to be sure that all forward-looking expense reductions are properly reflected.¹²³

Verizon excepts, disputing the premise that these are transitional costs incurred to move to a properly sized workforce and asserting that such costs are incurred by all businesses needing to restructure or refocus their workforces in a manner that may involve reductions in some areas and increases in others. It notes that its workforce overall was not substantially reduced between 1995 and 1999 and that nonmanagement workforce actually grew in order to meet the company's service related commitments. More specifically, it notes that one of the two mergers referred to by the Judge was not completed until 2000, after the period analyzed, and that AT&T itself, a company that has not experienced major mergers and not been subject to rate of return regulation, has also incurred SPE costs in recent years.¹²⁴ Finally, Verizon contends that to recognize an assumed level of productivity and merger savings without allowing the costs that must be incurred to realize those savings "is analogous to adopting rates that

¹²² Exhibit 410, CC-VZ-154 (revised supplemental response).

¹²³ R.D., pp. 59-60.

¹²⁴ Tr. 3,058.

reflect cost savings from a change in technology, while ignoring the costs of developing that technology."¹²⁵

In response, AT&T reviews the history of the issue and supports the Judge's rejection of what it characterizes as Verizon's "by now threadbare arguments."¹²⁶ It contends that Verizon has failed to demonstrate why it will continue to need workforce refocusing in the future and why its 1994-1999 experience provides a reliable basis for projecting the future. It notes that the 1994-1999 period included movement from cost-of-service regulation to incentive regulation, substantial corporate restructuring (including a significant merger), and the transition to dealing with at least limited competition. The CLEC Coalition likewise objects to any allowance, noting, among other things, Verizon's failure of proof.

Verizon's exception, like its argument to the Judge, makes a good case for the proposition that SPE costs should not be viewed entirely as a transitional matter and that they are likely to be incurred in some amount on an on-going basis. But the exception, again like the argument to the Judge, fails to provide any basis for estimating that on-going cost. The historical years studied by the company involved major changes in its operations and organization, and even if, as Verizon argues, its overall workforce did not decline, there is certainly reason to assume an atypically high degree of "refocusing."

As the party with the burden of proof, Verizon should have done more to parse its historical experience into its normal and non-normal components; and its failure to do so, together with the need, already noted, to review these expenses rigorously because of our approval of the FLC, could justify continued total disallowance of the item, as the Judge recommends. But burden of proof, for all its importance, is ultimately a device to be used for the purpose of setting of just and reasonable rates, and to disallow all SPE costs here on

¹²⁵ Verizon's Brief on Exceptions, p. 65.

¹²⁶ AT&T's Reply Brief on Exceptions, p. 70.

burden of proof grounds would be to reach a result that was procedurally justified but substantively wrong. In the absence of a better estimate, we will allow \$60 million of SPE costs, representing 75% of a five-year average of those costs in the early 1990s, before the advent of the mergers and competitive markets that tend to increase these expenses.¹²⁷ In doing so, we recognize the qualitative reality that these costs will not disappear in a TELRIC environment, but we keep the allowed amount properly low in view of Verizon's failure to prove a higher amount warranted.

3. Merger Savings

Verizon reflected, in its common overhead ACF, the savings associated with the NYNEX/Bell Atlantic merger but contended that the further savings associated with the Bell Atlantic/GTE merger could not yet be estimated. The Judge saw no doubt that an estimate of savings associated with the Bell Atlantic/GTE merger should be reflected, and he instructed Verizon to include an estimate of those savings in its Brief on Exceptions, which would follow the date for Verizon's submission on the matter in Case 00-C-1945, where the savings are being addressed. He invited all parties to comment on how to reflect those savings, inasmuch as rates would likely be set here before the conclusion of Case 00-C-1945.

AT&T urges recognition here at a minimum of the estimated savings submitted by Verizon in Case 00-C-1945, suggesting that the amount ultimately calculated in that case will likely exceed Verizon's estimate and that reflecting that minimum amount in UNE rates should not await the outcome of the separate proceeding. It would provide for further adjustment in UNE rates when Case 00-C-1945 is completed. In its reply brief on exceptions, AT&T questions two aspects of Verizon's estimate of the merger savings--its offsetting of projected 2003 merger savings by removing projected savings for 2001 and its removal of procurement expense savings and sales and marketing savings.

¹²⁷ See Resale Opinion, p. 59.

Verizon objects to any separate recognition of the Bell Atlantic/GTE merger savings, contending that their achievement is already reflected in its productivity adjustment, which the recommended decision has already increased. It insists that "realizing cost savings from mergers is one of the primary ways that companies can increase their productivity."¹²⁸ The CLEC Coalition responds that Verizon's productivity data predate the Bell Atlantic/GTE merger and that separate adjustments would not overlap.

We agree with the Judge that savings associated with the Bell Atlantic/GTE merger should be reflected here, and there is no basis for finding that they are already subsumed in Verizon's productivity adjustment.¹²⁹ Verizon's estimate of those savings (and its estimate of savings attributable to the NYNEX/Bell Atlantic merger) are being examined in Case 00-C-1945, and we should not here prejudge the outcome of that case. Accordingly, we adopt Verizon's savings estimates as placeholders and will set UNE rates on that basis; those rates should be adjusted prospectively at the conclusion of Case 00-C-1945 to reflect its results.

Depreciation ACF

In Phase 1 of the First Proceeding, we determined that the depreciation lives to be used in estimating UNE costs should be those set for Verizon consistent with the FCC's triennial represcription process; in so doing, we rejected Verizon's request to use shorter depreciation lives (and consequently higher expense) based on generally accepted accounting principles (GAAP). Consistent with that determination, Staff stated, as part of its effort early on to assist the parties in setting the scope of this proceeding, that
the Commission decided in [the First
Elements Proceeding] that TELRIC
depreciation rates should be based on
depreciation lives used in calculating

¹²⁸ Verizon's Reply Brief on Exceptions, p. 40.

¹²⁹ As noted above, we are granting Verizon's exception with respect to the amount of the general productivity adjustment.

booked depreciation on a regulatory basis. If the service lives for [Verizon's] plant changed since rates were set in [the First Proceeding], the new service lives and depreciation rates should be used in developing TELRIC element costs.¹³⁰

Claiming consistency with that precedent and guidance, Verizon proposed use of the depreciation lives we adopted for regulatory purposes effective January 1, 1998. The Judge, however, agreed with AT&T that rates should continue to be set on the basis of the longer service lives set by the FCC in 1995 and used in the First Proceeding. He found that the service lives we adopted in 1998 had been set pursuant to Verizon's Performance Regulatory Plan (PRP) and did not embody changes of the sort to be taken into account pursuant to Staff's August 1999 memo. He noted that Staff had expressed important reservations about those service lives, which Staff said it had reviewed only with respect to the benchmark established in the PRP; a full study conducted without the PRP's constraints might well have produced a different result. The Judge added that the 1998 changes predated Staff's August 1999 memo and that Staff, had it contemplated use of the 1998 changes here, could have said so. He regarded these considerations as outweighing Verizon's unsubstantiated concern that the 1995 depreciation rates had become stale.

On exceptions, Verizon contends that Staff was aware, when it stated in its memo that changed depreciation rates should be used in developing TELRIC costs, that the only mechanism for change was the one provided for in the PRP, and that Staff had determined, in the letter cited by the Judge, that the revised depreciation rates were consistent with the PRP guidelines. It suggests that Staff's reference to the different results that might be reached through a complete depreciation study was simply a "general reservation of differences, [providing] no basis for rejecting the use of regulated

¹³⁰ Staff memorandum dated August 11, 1999, quoted at Tr. 3,360 and in Verizon's Initial Brief, p. 69.

depreciation rates,"¹³¹ and that no testimony had been offered, by Staff or anyone else, as to the specific concerns Staff was referring to. In contrast, it adds, Verizon offered a witness prepared to testify on its depreciation ACF.

In response, AT&T dismisses Verizon's exceptions as cursory and unresponsive to the Judge's reasoning. It renews its claim (on which the Judge did not rely) that its own depreciation witness was better qualified to testify on the subject than Verizon's witness.

In agreeing with AT&T that the 1995 depreciation lives should be used, the Judge overstated the significance for this proceeding of Staff's reservations about the 1998 lives. Service lives for Verizon's plant have, in fact, been changed since the First Elements Proceeding, and the fact that those changes were made in the manner contemplated by the PRP-- something Staff would certainly have recognized when it provided the guidance in its scoping memo for this proceeding--is no reason to reject the use of those lives here. And though the special circumstances of the 1998 lives preclude reliance on them as precedent in any post-PRP consideration of depreciation, those shorter lives may well be appropriate for a TELRIC study, in that they better reflect the treatment of depreciation in the competitive market contemplated by TELRIC. Accordingly, Verizon's exception is granted.¹³²

¹³¹ Verizon's Brief on Exceptions, p. 73.

¹³² Verizon also asserts that the Staff calculations accompanying the recommended decision erroneously fail in some instances to use the recommended depreciation rates. There is no need, however, for any adjustment on that account. The depreciation ACFs calculated by Staff in fact differ in some instances from the Phase 1 depreciation CCFs, but that is not the result of a failure to use the proper depreciation rates. The difference results simply from insertion of the recommended service lives and salvage factors into Verizon's study for this proceeding, rather than its Phase 1 study.

COST OF CAPITAL

Introduction

Cost of capital presentations were made by Verizon and by AT&T jointly with WorldCom. Verizon proposed a figure of 12.6%, which it regarded as conservative in light of its study's conclusion that a forward-looking weighted average cost of capital related to the supplying of UNEs would be in the range of 13.03% to 13.38%. AT&T/WorldCom estimated the weighted average cost of capital to be in the range of 9.17% to 9.91%.

The parties differed little in their estimates of the cost of debt but disagreed sharply on cost of equity and capital structure. The differences reflected in part Verizon's view that it should be seen as a fully competitive enterprise subject to all the associated risks and entitled to a correspondingly higher return on investment and AT&T/WorldCom's contrary view that an incumbent local exchange company (and supplier of UNEs) remains an inherently less risky operation.

Verizon's witness calculated a cost of equity of 14.78%, based on a discounted cash flow (DCF) analysis of a proxy group comprising the companies included in the Standard and Poors (S&P) Industrials, and a debt cost of 7.77%. Verizon contemplated a debt/equity ratio in the range of 25%/75% to 20%/80%; the former implied an overall capital cost of 13.03%, while the latter implied 13.38%. In its studies, it used a figure of 12.6%, equal to the figure it uses in its own business decisions¹³³; in light of its witness's calculations, it regarded that figure as conservative.

AT&T/WorldCom's witness calculated an equity cost of 10.42%, averaging the results of a DCF analysis of a proxy group comprising the regional Bell holding companies and the larger independent telephone companies (10.24%) and a capital asset pricing model (CAPM) analysis (10.6%). AT&T/WorldCom envisioned a capital structure ranging from 54% debt/46% equity to 20% debt/80% equity, implying an overall cost of capital (assuming a

¹³³ Verizon's Reply Brief, p. 63.

debt cost of 7.86%) ranging from 9.17% to 9.91%; the midpoint of that range is 9.54%.¹³⁴

In the First Proceeding, we adopted a weighted average overall cost of capital of 10.2%, reflecting a cost of equity of 12.1% and a debt/equity ratio of 40%/60%.¹³⁵ Relying in large part on our analysis in the First Proceeding, the Judge recommends an overall cost of capital of 10.5%, comprising a cost of equity of 12.19%, a cost of debt of 7.39%, and a debt/equity ratio of 35%/65%. Verizon and AT&T except, the former challenging several aspects of the Judge's analysis and the latter contending that the Judge's figure is at the high end of the range of reasonableness and that proper application of his own analysis would have produced a substantially lower number.

The Recommended Decision

Noting the continued pertinence of our discussion of the issue in the Phase 1 opinion,¹³⁶ the Judge first determined that AT&T's proxy group again reflected Verizon's risk profile better than did Verizon's proxy group, and he recommended its use. He reasoned that just as TELRIC should not be understood to contemplate "a fantasy network" that makes use of speculative technology, so, too, should it not "be taken to require basing the cost of capital on a 'fantasy marketplace,' in which the provision of local telephone service is as competitive as the sale of detergent."¹³⁷ While such a market is the goal, it has not yet been achieved with respect to local service and appears even more remote with respect to UNEs. To recognize the movement that has been achieved, however, he recommended use of

¹³⁴ Tr. 2,292, reflecting the updated estimates in rebuttal testimony, as slightly increased in a letter to the Judge from AT&T's counsel dated January 31, 2001.

¹³⁵ Phase 1 Opinion, p. 40.

¹³⁶ Phase 1 Opinion, pp. 38-39.

¹³⁷ R.D., pp. 76-77.

a capital structure of 35% debt/65% equity, rather than the 40%/60% structure we contemplated in Phase 1.

Next, again relying on the Phase 1 precedent, the Judge rejected Verizon's renewed request to recognize quarterly dividends and flotation costs in calculating the cost of capital. In Phase 1, we rejected those measures as "unnecessary and contrary to precedent," and the Judge saw no need to modify that result here.

Finally, the Judge noted that in the Phase 1 Opinion we rejected AT&T's proposal to use a multistage DCF model rather than the single-stage model advocated by Verizon, that AT&T's arguments in the present case resembled in many ways those in Phase 1, and that there continued to be no basis for rejecting the single-growth model and adopting a three-growth model as a matter of principle or theory.¹³⁸ He went on to suggest, however, that the unusual circumstances that had led us to use a multistage DCF model in a limited number of cases appeared to exist here as well and warranted some adjustment to the result produced by the single-stage DCF analysis. He considered a range of options, found their results to vary widely, and ultimately concluded that the best course of action was to calculate a cost of equity by applying, to the current cost of debt, the equity risk premium¹³⁹ that emerged in Phase 1. That risk premium came to 4.8 percentage points; applying it to the debt cost here of 7.39% produced a cost of equity of 12.19%, which the Judge found to be well within the range supportable by the record as a whole. Because Verizon challenges various aspects of the Judge's analysis, it is here set forth in full:

Using the AT&T proxy group with updated data would suggest, under a one-growth DCF model, a return on equity of 14.77%--almost the same as the return Verizon calculated on the basis of its own proxy group. The

¹³⁸ R.D., p. 78.

¹³⁹ That is, the difference between the cost of debt and the cost of equity, reflecting the greater risk associated with equity.

figure comprises a dividend yield of 2.45% (measured as of March 30, 2001) and a growth rate of 12.32% (based on I/B/E/S growth rate as of March 15, 2001). Several factors suggest that result is unreliable and out-of-line, incorporating a growth rate that will not be sustained.

For one thing, the equity return calculated in the First Proceeding, 12.1%, exceeded the cost of debt calculated there (7.3%) by 4.8 percentage points. The present cost of debt (measured, as in Phase 1, as the average of Moody's composite rate for Aa rated debt and S&P's composite rate for A rated debt as of April 3, 2001) is 7.39%, and a 14.77 equity cost would exceed that figure by 7.38 percentage points. There is no explanation for so substantial an increase in equity risk premium, and it calls the calculated equity return seriously into question. Beyond that, there are several factors that could account for an extraordinarily high growth factor in the short run, among them the growth of wireless and data/internet and international services. These are unlikely to continue to sustain the growth factor in this way, and some remedial adjustment seems warranted.

Several alternatives present themselves. A three-growth DCF, applied to the AT&T proxy group, using the I/B/E/S growth rates for the first five years, an average of that growth rate and AT&T's alleged sustainable growth rate (6.29%) for the ensuing 15 years, and the sustainable growth rate thereafter produces an average equity cost of 10.30%. A two-stage analysis, using the sustainable rate after the first five years, produces an average cost of 9.26%. These figures appear unduly low, particularly when compared to a broadbased average calculated in the Merrill Lynch Quantitative Profiles analysis, using a three-stage growth model. The April 2001 edition of that document calculated a DCF return of 11.2% for both the S&P 500 and for a group of 29 telecommunications companies.

In view of these widely divergent estimates and the ongoing major changes in the industry that may account for them, it seems to me that a fair and conservative result can be obtained by applying to the current cost of debt the same equity risk

premium that emerged in the First Proceeding. The cost of debt, as noted, is now 7.39%, and the equity risk premium in the First Proceeding was 4.8 percentage points. That suggests a cost of equity in this proceeding of 12.19%, a figure well within the range supportable by the record as a whole. The resulting overall cost of capital, using a debt/equity ratio of 35%/65%, comes to 10.5%.¹⁴⁰

Exceptions

1. Verizon

Verizon contends the recommended cost of capital is unreasonably low, failing to reflect its risk in offering UNEs. Disputing the Judge's view that it would be wrong to contemplate vibrant competition in the offering of UNEs, it asserts that the FCC's Local Competition Order provides for UNE rates to approximate those that would be charged in a competitive market.¹⁴¹ It argues that the increase in competition since issuance of the Phase 1 opinion and anticipated further increases justify the higher risk premium that troubled the Judge, and it charges that the recommended decision's "treatment of this issue is result-oriented, unbalanced, and ignores the record."¹⁴² According to Verizon, the 14.77% cost of equity that resulted from application of a one-growth model to AT&T's proxy group was consistent with the results of its own witness's analyses, and the Judge's rejection of that result because of its high implicit risk premium conflicts with the requirement of the Local Competition Order that rates be set to simulate those that would prevail in a competitive market. Verizon alleges as well that the recommended decision fails to recognize risk factors other than competition such as operating leverage, the pace of technological change, and the regulatory environment. It stresses the last in particular, pointing to regulation's

¹⁴⁰ R.D., pp. 79-80.

¹⁴¹ Verizon's Brief on Exceptions, p. 74, citing Local Competition Order, ¶¶635, 679, and 738.

¹⁴² Verizon's Brief on Exceptions, p. 75.

imposition of large and thus far unrecovered investment in operational support systems and to the TELRIC construct, which requires rates well below actual costs.

Verizon disputes as well the Judge's treatment of capital structure, noting that it reflects only a relatively minor adjustment to the capital structure per Verizon's books, even though the Local Competition Order requires use of a market value capital structure which, according to Verizon, would contain more than 80% equity. It sees no basis for rejecting its witness's cost of capital analyses, some of which did not rely exclusively upon the S&P Industrials with their associated risk. It suggests several alternative figures to show the extent to which the Judge's 10.5% cost of capital is understated: using the recommended decision's proxy group and 11.8% cost of equity together with a 20%/80% debt/equity ratio produces a cost of capital of 11.23%; using Verizon's recommended capital structure and the 14.77% cost of equity that results from the recommended decision's single-stage DCF analysis produces a cost of capital of 13.3%; and using the recommended decision's capital structure with the 14.77% cost of equity produces a cost of capital of 12.20%.¹⁴³

Finally, Verizon notes that the cost of capital used by AT&T in making its investment decisions is 15.31%, and that the 12.6% reflected in Verizon's studies is equal to the figure Verizon has used in making its own investment decisions.¹⁴⁴ Noting once again that its witness's analyses called for a cost of capital of 13.03% to 13.38%, Verizon reiterates its view that 12.6% would be a conservative estimate of the true cost.

AT&T disputes Verizon's criticisms of the recommended decision, noting that Verizon failed to mention the Merrill Lynch analysis that produced a cost of equity substantially lower than that recommended by Verizon's witness. More specifically, it charges that Verizon's claim of vibrant competition is unsupported by the record and cites our

¹⁴³ Verizon's Brief on Exceptions, pp. 78-79.

¹⁴⁴ Id., p. 79, citing Tr. 2,892.

statement, in a recent opinion, that Verizon continued to dominate the special services market; it contends the same can be said with respect to the provision of UNEs.¹⁴⁵

AT&T characterizes as "the most peculiar aspect of Verizon's argument" its discussion of regulatory environment, contending that Verizon "may not be awarded a higher cost of capital because it has failed to present a credible case for recovery of its alleged OSS development costs or because it would prefer to base UNE rates on its historical rather than its forward-looking costs."¹⁴⁶ Among other specific points, AT&T contends that the internal cost of capital rates that it used for its own planning purposes are of no relevance here. Referring to its own exception, next discussed, it contends that the Judge's recommendation is at the high end of the range of reason and should be reduced by at least 100 basis points.

2. AT&T

AT&T contends that the Judge failed to follow through on his conclusions, and that a proper application of his analysis would result in a weighted average cost of capital no higher than 9.19%.¹⁴⁷ It endorses the Judge's conclusions with regard to the state of competition in the UNE markets, the consequent propriety of using the proxy group advanced by AT&T, and the need to depart here from the single-growth model. It goes on to cite the great importance in the calculation, as evidenced from the Judge's figures, of the choice between a single-stage and multi-stage model and to agree that the single-stage growth figure would be unsustainable. Turning to the Merrill Lynch analysis cited by the Judge, which calculates a

¹⁴⁵ AT&T's Reply Brief on Exceptions, p. 92, n. 42, citing Cases 00-C-2051 et al., Verizon New York, Inc. - Special Services, Opinion No. 01-1 (issued June 15, 2001).

¹⁴⁶ AT&T's Reply Brief on Exceptions, pp. 93-94.

¹⁴⁷ Verizon points out in response that the 9.19% figure appears to be an arithmetic error and should be 9.9%, given AT&T's statement that it represents the sum of 2.6% and 7.3%. (Verizon's Reply Brief on Exceptions, p. 41.)

DCF return of 11.2% for both the S&P 500 and a group of 29 communications companies, it contends that both of those groups are riskier on average than Verizon's UNE line of business. It therefore regards the study's 11.2% figure as a ceiling and excepts to the Judge's recommendation of a 12.19% cost of equity on the basis of his risk premium calculation. It urges reduction of the cost of equity to 11.2% and a resulting overall weighted average cost of capital of 9.19%.

Verizon responds that AT&T proposal here is unsupported by record evidence and is below the 9.54% cost of capital urged by its own witness. It disputes as well AT&T's claim that its figure is compelled by the Judge's reasoning, noting that the Judge relied on the Merrill Lynch analysis only as a basis for assessing the reasonableness of a multi-stage DCF. The analysis itself is not part of the record and played no role in the Judge's calculation of the recommended cost of capital. It argues again that its own 12.6% cost of capital is a conservative figure worthy of being adopted.

Discussion and Conclusion

The Judge for the most part followed the precedents we set in Phase 1, departing from them only when it appeared that the one-growth model produced an unreliable result incorporating an unsustainable growth and that the alternatives seemed no more reasonable. In view of the circumstances that appeared to account for the widely divergent results, he resorted to what amounts, essentially, to an update of the result we reached in Phase 1.

AT&T's exception provides no basis for reducing the result reached by the Judge in order to capture the "logical conclusion"¹⁴⁸ of his analysis; it simply calls for using some of the factors he took into account in a manner that suggests, through the application of AT&T's own judgment, a different figure. We are unpersuaded by that judgment, and AT&T's exception is denied.

¹⁴⁸ AT&T's Brief on Exceptions, p. 18.

Verizon's exception, meanwhile, amounts in essence to an argument that the Judge failed to take adequate account of the competitive risks that it faces in offering UNEs. But that, too, is a matter of judgment; and we are satisfied that the Judge's analysis accounts adequately for those risks, particularly given our decision (discussed above) to use shorter depreciation lives and thereby mitigate Verizon's risk as well as Verizon's right to petition for increased UNE rates in the future in the event it believes it can justify such action. All told, an equity risk premium of 4.8 percentage points reasonably recognizes the risks at hand.

Applying that risk premium to an updated cost of debt (as of January 3, 2002) of 7.33% suggests a return on equity of 12.13% and an overall return of 10.5%, as shown in the following table:

	<u>PERCENTAGE</u>	<u>COST</u>	<u>WEIGHTED COST</u>
Debt	35%	7.33%	2.6%
Equity	65%	12.13%	7.9%
Total	<u>100%</u>		<u>10.5%</u>

LOOP COSTS

Introduction and Overall Method

Verizon studied the costs of providing unbundled access to two- and four-wire analog loops and two- and four-wire

digital loops.¹⁴⁹ Its cost studies claim to assume a fully forward-looking design based on next-generation digital loop carrier (DLC) technology, supported by fiber optic feeder cable, even though DLC is nowhere near universal deployment. Among other things, DLC provides for the conversion of analog signals into digital format in a remote terminal (RT) located in the outside plant, allowing for the direct delivery of digital line signals to digital line switch ports. Verizon maintains this configuration is always less costly than one that terminates an analog signal at the switch, assuming costs are analyzed by taking account of the loop/switch combination as a whole rather than of the loop alone. According to Verizon, "comparing loop costs, without reference to switching costs, is a fallacy that undermines most CLEC analysis of the relative costs of all-copper loops and fiber-fed DLC-equipped loops at short lengths."¹⁵⁰ Verizon cites in this regard our endorsement, in the First Elements Proceeding, of a 100% fiber feeder/DLC configuration, and it continues to regard that premise as consistent with TELRIC.

Verizon's loop architecture also assumes the use of forward-looking GR-303 technology, which, among other things, permits a smaller number of switch ports to serve a given number

¹⁴⁹ According to Verizon, "a two-wire analog loop is a transmission circuit consisting of two wires that is used to both send and receive voice conversation in the 300-3000 Hz frequency range. This is the basic loop type used for providing voice-grade 'POTS' ["plain old telephone service"] service. A four-wire analog loop consists of two pairs, one to transmit and one to receive. It is used in certain private line and data service applications. A two-wire digital loop is a two-wire loop suitable for the transmission of certain high-speed data services. In particular, Verizon's two-wire digital ('premium') loop can be used to provide ISDN - Basic Rate interface ('BRI') service to an end-user customer. A four-wire digital loop will support DS1-level transmission. It can be used, among other things, to provide ISDN - Primary Rate Interface ('PRI') service to an end-user customer. (Tr. 2,421-22.)" Verizon's Initial Brief, pp. 108-109, n. 247.

¹⁵⁰ Id., p. 112.

of POTS loops.¹⁵¹ Nevertheless, Verizon's studies consider not only the "integrated" DS1-level GR-303 interface but also a more costly DS0-level "universal" (non-GR-303) interface. This use of universal DLC (ULDC) interfaces rather than integrated DLC (IDLC) is controversial and is discussed below.

Along with the foregoing technology assumptions, Verizon's study posited use of existing outside plant routes and lengths, on the premise that they are driven by factors, such as geography and local land-use requirements, that will not change in a forward-looking environment. To determine the equipment that would be deployed along those routes, it randomly selected 55 wire centers (representing all three of its proposed density zones) and asked its outside plant engineers to develop a forward-looking design for each of the 242 feeder routes within those wire centers. It explained that "the engineers were asked to assume current customer and central office locations, and current routing of feeder cable, but otherwise to develop designs that were in no way constrained by the current, 'embedded' deployment of facilities. In this way, Verizon insured that the loop design underlying its studies would be fully forward-looking."¹⁵² In determining the quantities of equipment to be deployed, Verizon made assumptions regarding utilization factors, and it applied what came to be called an "environmental factor," said to take account of zone-specific

¹⁵¹ The initially analog signal appears at the switch port as a DS0 digital channel (a voice-grade digital channel, i.e., a digital channel of the lowest capacity), having been converted to that format at the remote terminal. There is, however, no DS0-level loop/switch interface, and DS0s are grouped as a 24-channel DS1 for interconnection. The GR-303 interface group comprises up to 28 DS1 channel groups interconnecting a remote terminal and a switch, and it obviates a one-to-one association of switch ports and loops by taking advantage of the fact that only some customers will be requesting service at any given time and establishing a connection between a DS0 channel and a loop only when the customer picks up the phone. That phenomenon is referred to as "concentration." (Verizon's Initial Brief, p. 115.)

¹⁵² Verizon's Initial Brief, pp. 118-119.

differences in the amount of work required to install outside plant. Finally, it developed a "link cost calculator" that costs out the facilities designed by the outside plant engineers.

Verizon studies were subjected to a variety of criticisms, some of which continue to be raised on exceptions. As in the recommended decision, issues related specifically to digital subscriber loops (DSL) are discussed in a separate section.

Network Design and Loop Configuration

A major source of controversy in the First Elements Proceeding was Verizon's assumption of 100% fiber optic feeder; other parties argued, in general, that for relatively short loops (various cross-over points were identified) copper feeder would be less expensive, and the Hatfield Model contemplated its use. We ultimately determined to use the 100% fiber feeder network, finding that when installation and maintenance, among other things, were taken into account, fiber offered cost and operational advantages that warranted its use even for relatively short narrow band loops.¹⁵³ In the present proceeding, there is general (though not universal) agreement that all-fiber feeder is the technology of choice as long as it is deployed in a manner that maximizes its advantages; but several CLEC parties denied that Verizon had done so.

After reviewing the arguments, the Judge concluded that Verizon had "for the most part, successfully defended its network design."¹⁵⁴ But he applied several adjustments, which are the subject of exceptions by Verizon (for having been made at all) and by WorldCom (for not having gone far enough).¹⁵⁵

¹⁵³ Phase 1 Opinion, pp. 82-84; Phase 1 Rehearing Opinion, pp. 22-29.

¹⁵⁴ R.D., p. 87.

¹⁵⁵ One network configuration issue--the number of remote terminals per central office terminal--is considered in the context of fill factors.

1. Concentration Ratio

As already suggested, the concentration ratio represents the degree to which the number of loops can exceed the number of ports on the premise that a connection between a port and a loop will be needed only when the customer picks up the phone. WorldCom called for increasing the ratio from the 3:1 proposed by Verizon to as high as 6:1; Verizon contended, among other things, that so high a ratio could result in inadequate port capacity and blocked traffic. The Judge found that Verizon had not borne its burden of proving a 3:1 concentration ratio to be the absolute maximum but that a ratio as high as 6:1 could indeed imperil service and, "to ensure that prices set on the basis of a reasonable, least-cost premise,"¹⁵⁶ he recommended a concentration ratio of 4:1. Verizon and WorldCom except.

Verizon continues to advocate its 3:1 concentration ratio, which it says represents the judgment and experience of its network engineers on the best way to balance the countervailing interests in minimizing port costs per loop through a higher concentration ratio and avoiding the call blocking that would result if a free switch port were unavailable when needed because the ratio was too high. It reiterates its argument that a Verizon document cited by WorldCom in support of a 6:1 ratio did not in fact support that ratio in practice, contends as well that the Judge's recommended 4:1 ratio had no support in the record, and insists that the only relevant data in the record was Verizon's expert's testimony in support of the 3:1 ratio. Verizon adds that the 3:1 ratio is used in an actual network planning guideline and that it has no interest in increasing its own retail costs through an inefficient network design, given that its local exchange rates are capped by its PRP. Verizon warns that we "should be extremely reluctant to endorse potential service-affecting changes in network management guidelines based on

¹⁵⁶ R.D., p. 88.

nothing more than intuition."¹⁵⁷ It suggests as well that a forward-looking construct might require a lower concentration ratio because of longer holding times attributable to internet usage.

WorldCom, meanwhile, continues to urge a 6:1 concentration ratio, contending that it is supported by Verizon's economic and network planning studies. In its view, a 4:1 ratio does not make optimal use of NGDLC technology and therefore does not reflect least-cost network design as required by TELRIC. Verizon responds that WorldCom has offered no basis for challenging the Judge's conclusion that a concentration ratio as high as 6:1 could imperil adequate service, and it reiterates its explanation that the Verizon planning document relied on by WorldCom used the 6:1 ratio only as a strawman in a study conducted before the 3:1 concentration ratio was established as the actual field design guideline. WorldCom's reply, meanwhile, disputes Verizon's claim that no party provided evidence contrary to its 3:1 proposal, asserting that "Verizon is not given license to claim that no contradictory evidence exists simply because it does not like the contradictory evidence with which it was presented."¹⁵⁸ WorldCom characterizes Verizon's concerns about effects on service as a red herring and reiterates its argument that Verizon's concerns about call blockage arise from inefficiencies in the legacy network that would not exist in a forward-looking construct.

In effect, WorldCom's exception continues to claim that the Verizon planning document it cites is something other than what it appears to be, and Verizon's exception ignores the fact that while the planning document cannot be relied on to establish a 6:1 concentration ratio, it constitutes record evidence that a 3:1 ratio is not the only one that could be reasonably considered. In settling on a 4:1 ratio, the Judge reasonably took account of the state of the record as a whole

¹⁵⁷ Verizon's Brief on Exceptions, p. 28.

¹⁵⁸ WorldCom's Reply Brief on Exceptions, p. 30.

and of the countervailing interests at stake. We adopt that ratio for costing purposes; both exceptions are denied.¹⁵⁹

2. Integrated v. Universal DLC

Verizon studied two alternative loop/switch interfaces: the integrated DS1-level interface and the universal DS0-level interface. The latter is more expensive, but Verizon maintained its use was dictated in some circumstances by service choices made by the CLEC. Several CLECs disputed that premise.

The Judge credited the CLECs' argument that GR-303 technology should be able to obviate UDLC at least in the near future and that a properly forward-looking TELRIC analysis should take account of that. He noted as well, however, that the capacity may not be available now and that its timing was less than certain. Applying a procedure used in the First Proceeding in analogous situations, he recommended that rates be set now on the basis of UDLC connections in the situations where Verizon proposed to do so, but that they be adjusted downward one year from the date of the recommended decision, to reflect IDLC connections, unless Verizon could show that it would be unreasonable to make that adjustment. Verizon and several CLECs except.

Verizon objects to what it characterizes as a rebuttable presumption that the UDLC rate should be eliminated within one year. The issue, it asserts, is that GR-303 systems support only a DS1-level interface--"a fact that is not a minor, as yet unresolved technical blemish but one that lies at the heart of the GR-303 concept. There is no technical development that will 'cure' that fact, and no party introduced evidence to

¹⁵⁹ Verizon notes further that the 4:1 ratio was applied, in the Staff workpapers accompanying its rate recalculations, to universal interfaces and DS-1 central office terminals, neither of which support concentration, and that these errors should be corrected whatever the concentration ratio may be. Verizon's point is well-taken and the needed correction will be made.

the contrary."¹⁶⁰ Accordingly, a CLEC wishing to take advantage of GR-303 would have to purchase an entire DS1 level interface, comprising 24 DS0 channels, and doing so would be uneconomic for a CLEC wishing to purchase only a few loops at a particular central office terminal. Verizon therefore maintains the UDLC is a lower-cost alternative for some CLECs even in the forward-looking environment.

AT&T, WorldCom, and Covad object to any UDLC rate even for the short term. They contend that GR-303 technology can accommodate DS0 unbundling, pointing to record evidence of several methods for doing so. WorldCom asserts that the current state of Verizon's network should be disregarded inasmuch as GR-303 technology is technologically deployable and does not require access to a universal interface. Covad notes that there was no intimation in the First Elements Proceeding, where Verizon advocated use of IDLC, that use of that technology would require CLECs to purchase loops in groups of 24. It characterizes the recommended decision as giving Verizon a gift by allowing it to charge on the basis of embedded costs for one year.

In response, Verizon does not deny the technical feasibility of connecting a single voice-grade loop to an ILDC interface, but it insists that doing so would be inefficient, requiring the CLEC to bear the costs of a full DS1-level interface and, under some of the alternatives technologically available, requiring additional equipment. In response to Covad's observation about the Phase 1 decision, it notes that the purpose of this proceeding is to update and improve the rates set in Phase 1.

In a related issue raised for the first time on exceptions, AT&T and WorldCom urge that even if the recommended decision is adopted on this issue, the UDLC rates should not be applied to loops purchased as part of the UNE platform (UNE-P). WorldCom notes that Verizon's testimony proposed to price loops on the basis of UDLC only where the CLEC interconnects with

¹⁶⁰ Verizon's Brief on Exceptions, p. 29.

Verizon's loop network (UNE-L), which is not the case when UNE-P is purchased. They urge clarification on that point; AT&T adds a request for clarification that the UDLC rate would apply to UNE-L only where the CLEC elects to interface with Verizon at the DS0 level rather than the DS1 level. In addition, AT&T asks for clarification that the digital port rate applies to UNE-P.

In response, Verizon objects to what it characterizes as this deaveraging of UNE-P loops, suggesting that it would discourage facilities-based competition by imposing higher loop rates on CLECs that install their own switches. It suggests, instead, that a blended rate be set for all UNE loops, reflecting the relative proportions of IDLC, UDLC, and copper interfaces that will be encountered in the actual forward-looking network.

It seems clear that a IDLC connection can be made with a single DS0 loop; the question is whether it can yet be done in a manner that avoids making available to the CLEC (and, in fairness, requiring the CLEC to pay for) the remaining 23 DS0 loops in the DS1 bundle. The Judge properly recognized that that question is now unanswered but may eventually be answered positively, and we deny both exceptions. During the interval remaining before the review of the matter in May 2002, Verizon should work with interested CLECs to ascertain whether a single DS0 loop can, in fact, be unbundled and connected to an IDLC interface in a cost-effective manner.

In requesting clarification that UDLC rates would not apply to loops purchased as part of the UNE-P, AT&T and WorldCom seek a form of deaveraging that appears to be an unwarranted refinement in view of the uncertainty regarding the continued need for UDLC. In the event it becomes clear, when the matter is revisited in May, that UDLC-based pricing for DS0 loop connection will remain in place, the deaveraging favored by AT&T and WorldCom should be further examined. In addition, parties at that time should consider the possibility that the additional costs of a UDLC DS0 connection are better regarded as a switching cost rather than a loop cost. For now, rates should be set on a blended basis, along the lines suggested by Verizon.

Demand Forecast and Utilization Factors

Determining the needed level of investment requires assessing the demand for service over a pertinent period and the utilization (or "fill") factor for the equipment, i.e., an "estimate of the proportion of [the] facility that will be 'filled' with network usage."¹⁶¹ Higher fill factors imply less investment and consequently lower rates; the countervailing risk is that too high a fill factor may imply investment insufficient to provide adequate service.

In this section we first discuss the demand forecast, which the parties and the Judge considered in the context of the fill factor for loop distribution plant. That fill factor, which attracted the greatest degree of attention, is considered next, followed by a number of other fill factor issues related to loops. Fill factors related to other elements are discussed later in this order.

1. Demand Forecast

Verizon took account of "ultimate demand," that is, it recognized growth over a ten-year period. The Judge agreed with Verizon that the FCC had not ruled out the use of ultimate demand, which had to be taken into account to insure that the contemplated system would be properly sized, but he agreed as well with AT&T that current customers should not bear the full cost of serving demand that is not expected to eventuate for ten years. He dismissed AT&T's method for allocating those costs as needlessly complex and cumbersome, and he determined that ultimate demand should be recognized by taking account of the net present value of the ten-year average demand, assuming annual growth of 3%--the midpoint of the 2% to 4% annual growth that Verizon envisioned.

On exceptions, Verizon sees no basis for the adjustment, maintaining that planning on the basis of ultimate demand is needed to prevent service disruptions that would

¹⁶¹ Local Competition Order, ¶682.

affect current customers and that the cost of the needed cushion is properly regarded as a cost of serving current demand. Current customers, it continues, pay charges that represent only the current period costs of the ultimate demand while future customers pay the future period costs; overall, "the customers in each period pay only the costs accrued in that period for the investments necessary to effectively serve the demand in that period, including 'cushion' investments."¹⁶² In Verizon's view, the Judge's recommendation would guarantee underrecovery, since it would take no account of the additional investment needed to serve the future demand that is, in effect, being reallocated into the present. Verizon notes as well (and is joined in this regard by AT&T) that while the recommendation was to use the present value of the ten-year average demand, Staff's workpapers show that the adjustment was made on the basis of the simple average. In addition, the adjustment was applied to the whole loop rather than just to distribution cable, even though most of the other loop components are not sized on the basis of ultimate demand.

AT&T replies that Verizon's justification for imposing the cost of the entire network on current period customers is inconsistent with the ultimate demand planning concept, intended to avoid having to add increasing amounts of new spare capacity on an ongoing basis. Arguing that Verizon's method would require current period customers to pay the cost of currently required network facilities plus those needed for ten years of future growth and demand, it asserts that "Verizon is attempting to have its cake and eat it too by suggesting that it be permitted to recover the costs of ultimate demand at the front end, and then treating the ultimate demand concept as if it were in fact not ultimate at all but rather adjustable upward with every incremental growth in demand."¹⁶³ With regard to the implementation errors cited by Verizon, AT&T agrees that Staff's workpapers failed to use present value analysis but contends

¹⁶² Verizon's Brief on Exceptions, p. 34.

¹⁶³ AT&T's Reply Brief on Exceptions, p. 43.

that its use would decrease calculated loop costs rather than increase them. It also disputes the suggestion that loop components other than distribution cable are not designed on the basis of ultimate demand, pointing to Verizon's instructions, in the survey on which its cost study rests, that the entire loop be designed to accommodate ten years of anticipated growth.¹⁶⁴

WorldCom likewise notes that without the Judge's adjustment, costs would be spread only over current demand, and today's customers would be forced to bear the costs of future growth.

The Judge struck a fair balance between the need to take account of ultimate demand for planning purposes and the need to spread the costs of doing so in a manner that is fair to both present and future customers. Verizon's exception establishes no flaw in the balance he struck, and it is denied. The calculation carrying out the Judge's recommendation should be corrected in the manner agreed on by both parties. His adjustment should be applied to the entire loop unless Verizon can show, when it makes its compliance filing, that loop components other than distribution cable were not sized on an ultimate basis even though it appears, from the instructions cited by AT&T in its reply brief on exceptions, that they were.

2. Distribution Fill Factor

In the First Elements Proceeding, we adopted a 50% distribution fill factor. In the present case, Verizon assumed a 40% fill factor while various CLECs called for factors ranging from 50% to 75%. Emphasizing that "in resolving this issue we are pursuing not truth so much as fairness and reasonableness,"¹⁶⁵ the Judge found that the record suggested a range of reasonable factors running from something above 40% to something below 56%. Using Verizon's analysis but adjusting it in several respects, he settled on a distribution fill factor of 50%. Verizon, WorldCom, and AT&T except.

¹⁶⁴ Id., p. 44.

¹⁶⁵ R.D., p. 96.

Verizon's quantitative analysis in support of its 40% fill factor¹⁶⁶ began with a 60% factor, reflecting two lines per zoned household--necessary to accommodate long-term potential peak demand in the distribution area--and actual household demand of about 1.2 lines. Actual demand will be reduced on account of undeveloped land, vacancies, and the fact that some customers will not use Verizon's infrastructure; and Verizon therefore multiplied its 60% factor by 90% to reflect unbuilt but zoned land, 95% for vacancies, 90% for customers who do not use Verizon's wireline network, and 90% for breakage.¹⁶⁷ The resulting figure was a fill factor of 41.6%.

In considering Verizon's analysis, the Judge first determined, in view of the recent trend, that AT&T's estimate of 1.3 lines per household appeared more reasonable than Verizon's figure of 1.2, but he invited parties to present updated data, if available, on exceptions. Verizon reports in its brief that the figure for January 2001 was 1.26 lines per household, but it continues to argue that 1.2 is a better long-run, forward-looking estimate because increased penetration of DSL service and cable modems will cut into demand growth for second lines. AT&T responds that the Judge's figure of 1.3 lines is supported by record evidence and logical analysis.

The Judge next reduced Verizon's adjustment for undeveloped parcels from 10% to 5% on the premise that undeveloped parcels will presumably be developed in the future. Verizon argues that new undeveloped land is added in a service area as existing undeveloped parcels are filled, resulting in a dynamic equilibrium in which population growth is balanced by the platting and zoning of new land. Even in mature areas, it

¹⁶⁶ Verizon maintained as well that the 40% factor was supported by the estimates of its central engineering staff presented in Phase 1 and by application of adjustments and corrections to the 50% factor we there adopted.

¹⁶⁷ Breakage refers to what is otherwise termed the "lumpiness" of investment, i.e., the existence of minimum quantities of installable capacity, which makes it impossible to precisely match new installations with demand.

adds, developed lots may be lost to abandonment or changes in use. The Judge also reduced from 10% to 5% Verizon's adjustment for customers lost to competitors, reasoning that the loss of customers would be offset somewhat by customers acquired as undeveloped parcels are developed. Verizon regards the Judge's treatment as fallacious, inasmuch as the land usage estimate relates customer locations to the maximum possible number allowed by zoning while the competitive loss adjustment applies to actual customers, the percentage of whom will be lost to competition will not decline as the number of living units increases. With respect to both adjustments, AT&T replies that Verizon would place too much weight on the judgment of its own experts and allow insufficient leeway for the exercise of the Judge's judgment and our own. It contends that the Judge's treatment of these adjustments falls within the range of reasonableness identified on the record. The CLEC Coalition likewise endorses the Judge's reasoning, noting, among other things, the overlap among Verizon's adjustments.

Verizon adds, overall, that the Judge is in effect asserting that Verizon should be deploying less spare capacity than it currently deploys, and it urges us to recognize the potential effects of such a determination on service quality.

WorldCom's exception continues to urge a fill factor higher than 50%, noting that a recent publication of Telcordia (formerly Bellcore) shows a nationwide average loop fill factor of 65%. It asserts that the loop rates resulting from the 50% fill factor proposed by the Judge "remain unjustifiably high."¹⁶⁸ It notes as well that the FCC used a 75% fill factor in its universal service order.

Verizon replies that the FCC made it clear that its universal service proxy model is not applicable to UNE pricing and that the Telcordia figure--which is, in any event, extra-record--refers to feeder cable, not distribution cable.

In resolving this issue, it is important to keep in mind the Judge's point that there is no one "right" number that

¹⁶⁸ WorldCom's Brief on Exceptions, p. 23.

we are seeking; rather, we need a fair and reasonable estimate that takes account of the available information and the concerns at stake. The matter is inherently one on which informed judgments can differ.

The Judge found that AT&T's estimate of 1.3 lines per household is a better figure than Verizon's 1.2 lines; that view is strengthened by the recent data reported by Verizon. The Judge's other modifications to Verizon's adjustments, like the adjustments themselves, were less tied to specific evidence, but they, too, rested on sound rationales. Verizon's critique of the Judge's reasoning certainly suggests that it would have been wrong to disallow the adjustments entirely, but that is not what the Judge did. He recognized the conceptual merit of the adjustments but, applying his judgment to all the information before him, found a need to reduce them to avoid the risk that their net overall effect was overstated. The resulting fill factor of 50% is well within the range suggested by the record as a whole, and Verizon's exception to it is denied.

3. Other Utilization Factors

a. Remote Terminal Electronics

Verizon proposed a fill factor of 84% for RT electronics, which it sought to justify as the 90% objective fill factor, adjusted downward to allow for growth (4%) and churn (2%). The CLEC Alliance and WorldCom urged a 90% factor, arguing, in effect, that churn and growth were adequately accounted for in the difference between 100% fill and 90% fill. The Judge credited Verizon's explanation of why the objective fill factor of 90% did not in itself allow adequately for growth and churn, but he also found that Verizon had failed to show why its separate growth and churn factors were necessary and reasonable. Taking account of the need for fairness and of Verizon's burden of proof, he recommended a fill factor of 88%, which would allow a total of 2% for growth and churn.

Verizon excepts, contending that its fill factor is supported by the record and that the Judge cited no data and provided no analysis in support of his adjustment. Pointing to

the record, it explains how it calculated the 4% churn factor and 2% growth factor; cites recent data suggesting a statewide churn factor as high as 5.5% and suggests it was conservative in using the 4% figure associated with the New York metropolitan area; and argues that the two adjustments are cumulative and that each would be required in the absence of the other. It adds that forward-looking utilization factors can not be measured, because they are based on a network design not yet fully deployed, but that its analysis was based on engineering judgment and actual data and suggest the Judge's rejection of that analysis on burden of proof grounds sets a standard that cannot be met.

In response, AT&T cites the Judge's statement that "Verizon has explained why the objective fill factor of 90% does not in itself allow adequately for growth and churn, but it has not shown that its separate growth and churn factors are both necessary and reasonable."¹⁶⁹ It contends that Verizon's exception focuses only on the second clause of that statement, failing to recognize the implication of the first clause that growth and churn are recognized in part, albeit it not adequately, in the 90% factor. Accordingly, it suggests, the Judge found an additional 2% allowance to be adequate. WorldCom likewise defends the Judge's recommendation as record-based, but continues to support its own 90% fill factor.

Verizon has met its burden insofar as it has shown that growth and churn are separate matters, and the Judge properly found that they were not adequately allowed for in the 90% objective fill factor. But there nonetheless is overlap between the reasonable ranges for these items, and the Judge reasonably concluded that 88% was a figure that adequately took account of all of them. Verizon's pure reliance on actual data is insufficient; again, some forward-looking analysis is required. We adopt the Judge's recommendation as a sound exercise of judgment.

¹⁶⁹ R.D., p. 99.

b. RT Enclosures and COTs

For remote terminal enclosures, Verizon used fill factors of 70.9% in the Manhattan zone, 56.7% in the major cities zone, and 44.8% in the rest-of-state zones. The CLEC Alliance and WorldCom recommended a factor of 84%, which the Judge rejected on the basis of qualitative considerations identified by Verizon as suggesting that figure was too high. He found, however, that Verizon had failed to make a quantitative showing in support of its own fill factors and, "recalling once again that Verizon bears the burden of proof, and recognizing that there is considerable flexibility in designing RT enclosures (even if not as much flexibility as WorldCom and CLEC Alliance would have it), [he recommended] that Verizon's proposed RT enclosure fill factor in each zone be adjusted upward by 15%."¹⁷⁰ He likewise recommended a 15% upward adjustment in Verizon's utilization factor for central office terminals (COTs), rejecting the CLEC Alliance and WorldCom's recommended factor of 90% but noting the need to take account in this utilization factor of Verizon's failure to show convincingly that more than two RTs per COT would be unacceptable.

Verizon excepts, again alleging no quantitative or analytical support for the Judge's adjustment, based solely on a finding that Verizon had failed to meet its burden of proof. It adds that the utilization factors for RT enclosures and COTs are not an input parameter to its cost studies; rather, they emerge after the fact from the routes designed by Verizon's engineers on the basis of forward-looking engineering considerations, including the need to allow for growth and modularity in the size of available facilities. There is, accordingly, no one spreadsheet item that can be adjusted, and Staff's workpapers applied the adjustment by multiplying the number of lines served by the facilities by 115%. Verizon argues that the result of that calculation include facilities that exceed their capacity (that is, with utilization factor greater than 100%) or that are

¹⁷⁰ R.D., pp. 99-100.

unreasonably close to their capacity. Verizon presents in a attachment to its brief examples of these phenomena, contending they demonstrate the adjustment to have been unwarranted.

AT&T responds by again asserting that Verizon has ignored the analysis in the recommended decision, which refers, among other things, to Verizon's ability to deploy facilities in a way that can maximize their utilization. It suggests the Judge did not explicitly find that Verizon had failed to meet its burden of proof but, instead, simply recognized that burden, placing it in the context of the regulator's need to keep in mind that the "utility has a clear self-interest in erring on the side of high cost forecasts."¹⁷¹ AT&T therefore regards the Judge's skepticism about Verizon's specific factors as proper and asserts that "since ultimately all factors reflect prediction and judgment, they are not susceptible to proof to a mathematical certainty. [His recommended decision] is quite correct in not accepting uncritically Verizon's own judgments as to the precise level of fill factors for RT enclosures and COTs."¹⁷² Finally, AT&T sees the 15% adjustment as affecting the costs to be recovered by Verizon through its UNE rates, and in no way undermined by the fact that when it is applied on a facility-by-facility basis--something necessitated only by the design of Verizon's cost study--it results in some facilities exceeding 100% of their capacity. The adjustment, according to AT&T, "will of course have no real world effect on the actual utilization or capacity of any particular Verizon network facility."¹⁷³

WorldCom's exception, meanwhile, maintains that Verizon's assumption of only two RTs per COT fails to capture forward looking efficiencies and that the matter is not adequately addressed by the Judge's adjustment to the fill factor. It urges a fill factor of 90% and an assumption of five

¹⁷¹ R.D., p. 87, cited at AT&T's Reply Brief on Exceptions, p. 48.

¹⁷² AT&T's Reply Brief on Exceptions, pp. 48-49.

¹⁷³ Id., p. 50.

RTs per COT in order to spread COT costs over more loops, citing a portion of the proprietary record as support for its premise. WorldCom urges as well an 84% fill factor for RT enclosures, renewing its contention that Verizon's fill factors are unreasonably low and contending that the Judge's 15% adjustment is inadequate.

In response, Verizon argues that its network planning guidelines--cited by WorldCom as encouraging multiple RTs--note the additional costs that may be associated with multiple RTs, including the need for round-the-clock access. Because of such concerns, it continues, multiple RTs are used only where the alternative would be grossly inefficient underutilization of COTs, which is not the case in Verizon's studies. It sees no basis for the utilization factors proposed by WorldCom and notes, among other things, that minimum size RT enclosures often cannot be installed on the sites that are available, requiring the use of a larger enclosure and consequently reduced fill factor.

The possible difficulties identified by Verizon with respect to multiple RTs preclude outright adoption of a multiple RT network design premise, but, as already suggested, the potential use of multiple RTs is something that can be reflected in the COT fill factor. The Judge's 15% adjustment does so, and it is adopted.

With respect to RT enclosures, the Judge's adjustment again took account of the record as a whole, and recognized the design flexibility that was available. AT&T has explained why the seeming anomaly identified by Verizon on exceptions is not dispositive, and the Judge's adjustment is adopted.

Environmental Factor

To test its intuitive hypothesis that the amount of work required to install outside plant might vary by geographic area, Verizon analyzed its engineering and construction records information system (ECRIS) data to identify such variation and

found higher costs in dense areas such as Manhattan.¹⁷⁴ The study compared, by geographic region corresponding to Verizon's nine strategic business units (SBUs) and three density zones, the actual labor time required to perform outside plant work operations against the standardized time for the same work operations. The standardized times, developed by Verizon's consultant H. B. Maynard and Company, estimate "the standard, average time for performing the function, regardless of where in the State it is performed, except for minor differences in the travel time to and from the work site."¹⁷⁵ Actual and standard times alike take account of the types and amounts of plant that is placed, rearranged, or removed; but the actual time considers, as well, factors that depend on locale and density specific conditions. These include, among others, "traffic conditions at the work site; terrain requiring hand digging; locations requiring the removal and restoration of fences, posts, and other objects; locations requiring landscaping; locations requiring minimum two-person crews; locations requiring the removal of waste contaminants (with contractors); locations requiring security arrangements."¹⁷⁶

The analysis was performed by Verizon's statistical consultant NERA, which examined more than 388,000 individual work operations associated with over 4,000 outside plant estimate jobs throughout the state. The study found that the Manhattan had an actual-to-standardized-labor-time ratio of 1.59, the highest in the State, and that the statewide average ratio was 1.37. (Verizon explained a statewide average greater than 1.0 by noting that the ECRIS standardized times do not account for all the costs actually incurred in performing outside plant work, omitting the locale-specific conditions that

¹⁷⁴ It should be recognized that previous deaveraging studies took account of inter-zone differences in technology, equipment deployment and loop length. They did not take account of zone-specific differences in the amount of work required to install outside plant.

¹⁷⁵ Verizon's Initial Brief, p. 137.

¹⁷⁶ Id., pp. 137-138, n. 313, citing Tr. 2,472-2,473.

show up in actual worktimes.) Asserting that NERA's statistical analysis shows the differences in the ratios to be statistically significant, Verizon argued that these costs must be taken into account in determining loop costs.

CLECs objected to the environmental factor on several grounds, contending that it would undo the forward-looking considerations reflected in the ECRIS standard time increments and asserting that application of the environmental factor impeaches the ECRIS database that Verizon otherwise relies on.

The Judge found the environmental factor to be reasonable in principle as a method to recognize empirically derived geographical cost differences. He was unpersuaded, however, by Verizon's attempt to explain why the statewide average actual-to-standardized ratio substantially exceeded unity; if the reason was that the ECRIS standardized times failed to include all pertinent costs, he held, Verizon was, indeed, impeaching its own ECRIS estimates. He therefore recommended that Verizon be required to recalculate the environmental factor in a manner that assumes a statewide average of 1.0 and adjust each regional environmental factor pro rata. Verizon excepts to that modification; AT&T and WorldCom except to adoption of the environmental factor in principle.

WorldCom and AT&T both note that ECRIS data have been relied on for years and that the standard time increments assume forward-looking efficiencies and labor. The environmental factor, they contend, would eliminate those efficiencies. WorldCom sees no basis for Verizon's assertion that the difference between standard time increments and actual times are caused by environmental conditions rather than inefficient work practices, noting that the NERA analysis measured only the differences and did not attempt to determine their causes. It contends as well that the record shows that ECRIS estimates include locale-specific costs,¹⁷⁷ obviating any adjustment on that account. AT&T suggests that the effect of the environmental factor, even when reduced as recommended by the Judge, shifts

¹⁷⁷ Citing Tr. 4,702-4,704.

costs among geographic density zones within the State in an unjustified manner.

Verizon responds that while ECRIS already reflects such locale-specific items as travel time and hourly labor rates, the environmental factor captures, in a manner superior to ECRIS, other matters such as traffic jams and weather conditions that cannot be anticipated for specific jobs. That these factors "vary systematically by geography," it says, "shows that they cannot be facilely attributed to inefficiency, as WorldCom attempts to do."¹⁷⁸

In its own exception, Verizon renews its argument that its analysis confirmed, in a statistically significant manner, the intuitive belief that there were significant geographic variations in worktimes for various tasks. The ratio of actual to standardized times for Manhattan was 1.59, the highest identified; the statewide average was 1.37. Verizon objects to the Judge's recommendation to reduce the statewide average to 1.0, noting that it would have the effect of reducing the Manhattan ratio to 1.16. Because the ECRIS standardized times do not account for "locale-specific conditions" such as time lost due to traffic activity or weather conditions, it says, the Judge's recommendation would improperly disregard those costs. It disputes as well the suggestion that the difference between standardized and actual times is attributable to inefficiency, citing its witness's testimony that the PRP provides incentives to efficiency and that the statistically significant geographic variation in any event belies the suggestion. Verizon likewise denies that it is impeaching the ECRIS estimates, which have their purpose but do not necessarily reflect all of the costs that should be taken account of in a TELRIC analysis. It notes that in actual field applications the ECRIS factors are increased by certain locality specific adder variables and that the factors incorporated here simply represent another type of variable.

¹⁷⁸ Verizon's Reply Brief on Exceptions, p. 23.

AT&T responds that the Judge's recommendation (which it objects to for reasons already noted) would recognize geographic differences without permitting "use of the environmental factor as a backdoor mechanism for increasing Verizon's indicated costs on a statewide basis."¹⁷⁹ Z-Tel likewise responds that the Judge's adjustment insures that the environmental factor recognizes geographic variations without increasing costs overall and expresses skepticism that Verizon would rely on the ECRIS database in the conduct of its business if the database understated costs to the extent Verizon contends here.

It is indisputable that costs differ from one geographic area to another, and proper cost analysis should take reasonable account of those differences. Verizon presented its environmental factor primarily as a mechanism for doing so, and the Judge accordingly understood it as a deaveraging measure that should not increase the overall average cost. His adjustment applied that understanding, reducing the overall environmental factor to unity.

Verizon now contends that the point of the environmental factor is not only to deaverage but also to recognize costs that simply are not included in the ECRIS standardized worktimes. As part of that process, the base to which the environmental factor was applied was first reduced to exclude the locale-specific "adders" already build into ECRIS. Application of the environmental factor represented an effort to restore the adders in a manner that calculates the variation more rigorously; and it is that restoration that accounts for a statewide average ratio (of costs reflecting the environmental factor to ECRIS costs net of any adders) greater than one. Verizon asserts on exceptions that restoration of the adders alone would have produced a statewide average ratio of 1.32, and it argues that the theory behind the Judge's adjustment would

¹⁷⁹ AT&T's Reply Brief on Exceptions, p. 52.

warrant reducing the 1.37 ratio only to 1.32, not all the way to 1.0.¹⁸⁰

The difficulty with Verizon's position, however, is that it effectively adjusts the ECRIS worktimes to take account of actual costs in a manner that may substantially undo the reflection in ECRIS of forward-looking efficiencies. Verizon itself has characterized ECRIS as one of the features contributing to the TELRIC-compliance of its studies, inasmuch as the ECRIS "standard time increments assume forward looking efficiencies in labor that have not been achieved in actual experience."¹⁸¹ A TELRIC-compliant study can (and should) take account of geographic variation, but Verizon's calculation of the costs to be added to recognize geographic variation fails to distinguish between costs genuinely attributable to locale-specific circumstances and those resulting from inefficiencies that a forward-looking study should disallow.

That failure on Verizon's part would warrant adoption of the Judge's adjustment, to ensure that the environmental factor is used only to deaverage and not to recognize additional, potentially inefficient, locale-specific costs. But Verizon has shown, as a qualitative matter, that some additional locale-specific costs need to be allowed for, and while it has not shown, as a quantitative matter, how much of its actual costs may be attributed to inefficiency, it seems unreasonable to assume that figure to be more than 50%. Accordingly, we will not deny Verizon's exception outright but will recognize 50% of the costs at issue in its exception. (In other words, the statewide average environmental factor should be reduced to 1.185:1, and the regional factors should be adjusted pro rata.) That result strikes a fair balance, on the state of this record, between recognizing additional costs attributable to geographic variation and limiting the risk of allowing recovery of

¹⁸⁰ Verizon's Brief on Exceptions, p. 41, fn. 105; Verizon's Reply Brief on Exceptions, p. 22, fn. 63.

¹⁸¹ First Network Elements Proceeding, Exh. 135, response to ATT-NYT-255.

inefficiencies that should be excluded from a forward-looking study.¹⁸² Correspondingly, the exceptions of AT&T and WorldCom, which would disallow the environmental factor entirely, are denied.

Link Cost Calculator

Verizon's link cost calculator pulls together the various loop cost inputs and calculates an overall result. AT&T alleged ten specific errors in the calculator's operation. Verizon's rebuttal testimony acknowledged and corrected for two of them, and the Judge resolved the remainder (including one as to which Verizon acknowledged the error but applied a correction AT&T deemed inadequate). Only those that continue to be at issue on exceptions are here discussed; the item designations are those applied by AT&T and used in the recommended decision.

Item D. AT&T adjusted the link cost calculator to eliminate the cost for copper riser cable in situations where fiber is assumed to go directly to the customer premises. The Judge was persuaded by Verizon's qualitative explanation that the situation at issue is one in which the fiber goes directly to the customer's building but that copper riser would still be needed to reach customers on upper floors, but he agreed with AT&T that Verizon had failed to establish the frequency with which copper would be needed on that account. He invited Verizon to provide further detail in its brief on exceptions.

In that brief, Verizon asserts that the forward-looking amount of intrabuilding copper needed in large building environments was taken into account in the feeder route survey, and comes to 162 feet. It submits as well an analysis based on Manhattan building height data which, it says, supports that result.

AT&T responds that Verizon has submitted not actual data but an analysis based on new, unsupported, extra-record

¹⁸² To state the matter differently, we are applying a very rigorous productivity adjustment to Verizon's figure, a step warranted by Verizon's reliance on actual data without any persuasive effort to remove the effects of inefficiency.

assumptions regarding building configurations in Manhattan. It objects in general to Verizon being allowed to supplement its evidence and urges us to scrutinize it skeptically.

The Judge properly found AT&T's total disallowance to be wrong in concept, and Verizon's presentation on exceptions establishes that it recognized a reasonable amount of copper riser cable in the situations at issue. No adjustment to the link cost calculator need be made on this account.

Item F. AT&T substituted an average installed pole price of \$417 for Verizon's range of \$385 to \$765 per pole. The Judge found that Verizon had demonstrated on rebuttal both the propriety of not using a statewide average and the flaws in AT&T's analysis, but he expressed concern about Verizon's uncritical reliance on unadjusted embedded pole costs. He recommended a 10% downward adjustment to Verizon's figures as an interim measure, instructing Verizon to present on exceptions an analysis of recent trends in its own pole costs. Verizon submits that analysis as Attachment 5 to its brief, and AT&T does not respond.

The current data submitted by Verizon suggest that the Judge's 10% downward adjustment to installed pole costs was conservative. A somewhat larger adjustment might be warranted, but in the absence of more definitive trends, we adopt the Judge's result.

Item G. Acknowledging an error pointed out by AT&T, Verizon corrected its study with respect to the sharing of poles with electric utilities and cable television companies. AT&T contended in brief, however, that Verizon had in effect taken back its concession by eliminating an adjustment to the multiple sheaths between poles that it believed was inappropriate in the distribution portion of the link. The Judge found that Verizon had not specifically shown why AT&T's multiple sheath adjustment was inappropriate but that AT&T, for its part, had never explained why the adjustment had been offered. He noted that while Verizon bears the burden of proof, its opponents have the burden of going forward with evidence challenging particular aspects of Verizon's study; in the absence of any such evidence,

Verizon had no need to specifically disprove AT&T's adjustment. He invited the parties to address the matter further on exceptions.

AT&T now asserts that the Judge "inexplicably forgives Verizon's entire failure of proof and improperly shifts the burden of proof to AT&T."¹⁸³ It contends that it submitted its adjustment to reflect fully the sharing of pole structures in Verizon's cost calculations and that the issue of multiple sheaths was raised only by Verizon in responding to the adjustment. It therefore sees no basis for the conclusion that AT&T bore the burden of proof on the issue.

Verizon responds that its rebuttal testimony reflected and explained its adjustment to correct the error in its original testimony that AT&T had identified. It contends that AT&T has not supported its challenge to Verizon's adjustment and that "Verizon's burden of proof does not 'kick in' with respect to specific challenges until the challenging party's burden of going forward is satisfied."¹⁸⁴

AT&T's exception does not provide further substantive explanation of its adjustment, as the Judge invited, but simply disputes the Judge's treatment of the burden of proof issue. But that treatment was correct and consistent with longstanding practice, and AT&T's exception therefore is denied.

Item I. AT&T charged that Verizon in effect applied too low a fill factor to inner duct¹⁸⁵ by first assuming that each conduit carries three inner ducts, two of which are used and one of which serves as a spare, thereby establishing a tacit utilization factor of 66.7%; and then applying a 60% utilization factor, reducing the effective factor to only 40%. Verizon contended that the 60% utilization factor accounts for the spare ducts in a duct bank rather than the spare inner duct in a duct,

¹⁸³ AT&T's Brief on Exceptions, pp. 38-39.

¹⁸⁴ Verizon's Reply Brief on Exceptions, p. 23.

¹⁸⁵ "Inner duct" refers to small pipes or tubes placed inside a conventional duct to allow the installation of multiple wires or cables.

but the Judge found that it had failed "to disprove the reasonable allegation that it overstates costs through overlapping fill factors that provide more excess capacity than is needed,"¹⁸⁶ and he adopted AT&T's adjustment.

Verizon excepts, arguing that the recommendation effectively assumes that only the number of conduits needed at any given time would be deployed in a trench. That, however, would require frequent costly and disruptive outside plant work to open trenches and add new conduits as demand grows. It argues that the third inner duct cannot be used to satisfy demand growth because it is there to provide contingency capacity, and cannot be used on a planned basis to support cable additions or emergency maintenance. In any event, it adds, inner duct would not be used at all in conduit containing copper distribution cable.

AT&T responds that Verizon has not shown any flaw in the Judge's conclusion that a 40% fill factor overstates the amount of needed excess capacity and it again charges that Verizon is seeking to have current users pay 100% of the cost for facilities that would be only 40% used.

Verizon's arguments explain why two types of fill factor need to be recognized here, but they fail to demonstrate the absence of overlap between them and the need for a cumulative fill factor as low as 40%. The Judge's resolution of the issue was reasonable, and Verizon's exception is denied.

Dark Fiber

"Dark fiber" refers to a fiber optic strand within an in-place fiber optic sheath that is "not connected to electronic equipment needed to power the line in order to transmit information."¹⁸⁷ It is offered only on an as-is, where-available basis, where spare facilities exist. Rhythms/Covad accordingly argued that Verizon incurs no capacity costs in connection with dark fiber and that CLECs purchasing it should not pay capacity

¹⁸⁶ R.D., p. 117.

¹⁸⁷ Verizon's Initial Brief, p. 155.

costs. The Judge agreed with Verizon, however, that "when all is said and done, the provision of a dark fiber cable would mean one less spare was available for other purposes, and the purchasing CLEC should bear the associated costs."¹⁸⁸ Noting, however, the possibility that Verizon might be able to recapture a dark fiber cable if it were needed--a possibility raised by Rhythms/Covad on the basis of information from a New Jersey proceeding--the Judge suggested that such a right of recapture might reduce or eliminate the capacity costs associated with dark fiber. The record was unclear with regard to the right of recapture, and he asked Verizon to clarify the matter on exceptions.

In its brief on exceptions, Verizon confirms that its New York dark fiber tariff provides no right of recapture. It adds that even if there were a right of recapture, the CLEC would be using and benefiting from a Verizon facility and should pay a capacity cost for the period in which it is used. Rhythms/Covad suggest that Verizon's offering of that argument--which they dispute--betokens an intention to recapture dark fiber despite its tariff provision, and they argue that Verizon's reference to a tariff provision that they regard as inconclusive fails to provide the clarification of the matter requested by the Judge. It seems clear, however, that the tariff provision precludes recapture and that capacity costs should be allowed, as the Judge recommends; we need not reach the hypothetical question of whether the existence of a right of recapture would warrant a different result.

Rhythms/Covad except to what they characterize as the Judge's failure to address himself to their separate argument that no fill factor should be applied to dark fiber. They assert that dark fiber in effect is a product of fill factors, coming into existence because Verizon placed more fiber in service than was needed and that the cost of the spare fiber is already recovered through the application of fill factors in

¹⁸⁸ R.D., p. 118.

other rates. They warn that allowing a fill factor for dark fiber would permit multiple recovery of those costs.

Verizon responds that UNEs always are drawn from spare capacity and are not provisioned by assigning to the CLEC a loop that is already in use. It explains that "an overall pool of interoffice fiber exists, with a level of spare that is reflected in the appropriate utilization factor, and all orders for fiber transport facilities, whether 'lit' or dark are filled from the spare in that pool. (A similar analysis applies to loop dark fiber.)"¹⁸⁹ It therefore sees no basis for a fill factor for dark fiber any different from that used generally.

Verizon's response is persuasive; Rhythms/Covad's exception is denied.

House and Riser Cable

House and riser cable is placed in a multi-story building, running from a point of interconnection within the building, often in the basement, to the network side of the customer's network interface device. Several issues related to house and riser rates were posed and resolved by the Judge; the issues that persist on exceptions involve the fill factor and the house and riser asset inquiry charge.

1. House and Riser Fill Factor

In the First Elements Proceeding, Verizon proposed and we adopted a fill factor of 65% for house and riser cable. In the present proceeding, Verizon proposed to reduce that factor to 40%. AT&T suggested the 56% fill factor it recommended for distribution plant generally, and the CLEC Coalition urged retention of the 65% factor used in the First Proceeding. The Judge recommended a fill factor of 60%, finding, among other things, that Verizon had not shown why it here proposed to apply the distribution fill factor to house and riser cable even though it had proposed a much higher factor in the First Proceeding.

¹⁸⁹ Verizon's Reply Brief on Exceptions, p. 24.

Verizon excepts, contending that the factor proposed in the First Proceeding should not govern here inasmuch as the purpose of this proceeding is to update, extend, and refine the studies used earlier. It cites the difficulty and expense of augmenting capacity within an existing building and asserts that with the exception of undeveloped lots, the factors bearing on utilization factor for distribution cable generally apply as well to house and riser cable. If anything, it suggests, use of the same factor overstates the achieved utilization in high rise buildings, given the need to provide extra capacity at construction in order to avoid costly additions later. It notes as well AT&T's use for house and riser cable of the same 56% fill factor it uses for distribution cable generally.

AT&T responds that Verizon's exception merely asserts that the factor adopted in the First Proceeding should not govern here but fails to offer any reasons or explanation. The CLEC Coalition likewise asserts that Verizon has not shown why the factor should be reduced to such a great extent and it notes that AT&T, in recommending the same factor for distribution and house and riser, called for the factor to be 56%. The CLEC Alliance cites the argument that house and riser utilization should be higher than distribution utilization generally because it serves a fixed area with more predictable growth rates and comparatively smaller augmentation costs.

As the Judge found, the factors tending to increase the house and riser fill factor in comparison with that for distribution cable are offset by the countervailing factors identified by Verizon. It is noteworthy as well that AT&T, like Verizon, appears to believe that offset is total, advocating use of the same fill factor (56% in AT&T's case; 40% in Verizon's) for both elements. At the same time, we cannot disregard the fact that in the First Proceeding, Verizon advocated a much higher fill factor for house and riser cable than for distribution cable. Verizon is not bound by the First Proceeding, nor are we, and methodological improvements are among the purposes of the present case; but the considerations cited here as warranting the same fill factor for the two

services are not newly discovered and Verizon has not fully explained its significant change of position.

In all, it appears to us that house and riser cable should have a higher fill factor than distribution cable, but that the difference should be less than the ten percentage points the Judge recommends. We will use a factor of 55%, the midpoint of the 50%-60% range.

2. Asset Inquiry Charge

The house and riser asset inquiry charge is imposed when a question about ownership of house and riser cable cannot be answered through the database available free of charge on Verizon's website and intervention by engineers is needed. AT&T urged rejection of the charge, contending that it improperly requires CLECs to bear the costs created by historical inadequacies in Verizon's inventory records. The Judge determined that a strict TELRIC construct might require disallowance of the costs even if Verizon had not acted imprudently (in the classical regulatory sense) in designing its system, inasmuch as the costs might not have been incurred at all had the embedded record keeping system been designed with the provision of UNEs in mind. He nevertheless recommended allowance of the costs, on the grounds that "there is no showing of imprudence; the costs are real and calculated in a forward-looking manner; it seems likely that at least some of these costs would be incurred in connection with a database that contemplated provision of UNEs; and denying the costs outright would incur the risk of assuming a 'fantasy' record keeping system."¹⁹⁰

The Attorney General excepts, arguing, first, that Verizon needs accurate information regarding asset ownership for its own business purposes, without regard to provision of UNEs. Accordingly, it incurs the associated costs even without providing UNEs. In addition, the Attorney General asserts, it may be proper for CLECs to pay for the cost of making house and

¹⁹⁰ R.D., pp. 122-123.

riser asset records available to them, but the recommended decision does not state that Verizon has documented those particular costs. Verizon does not respond.

Verizon has reasonably documented the costs at issue (subject, of course, to the generally applicable adjustments we are adopting), and the Judge reasonably explained why they should be allowed, taking account of the sorts of concerns raised by the Attorney General. The exception does not warrant changing that result, and it is denied.

Loop Rate Deaveraging

Verizon proposed to continue the existing arrangements for deaveraging loop rates into three zones: Manhattan (Zone 1A), major cities (Zone 1B), and the remainder of the State (Zone 2).¹⁹¹ FairPoint proposed an alternative, revenue-neutral, deaveraging plan intended to foster local exchange competition in some of the more densely populated areas now included in Zone 2; in effect, it would distinguish between small cities and suburban areas on the one hand and rural areas on the other. FairPoint offered five specific proposals, all intended to insure "that the Rural rateband would . . . apply to truly rural areas and not to the downtown area of smaller cities and towns. Each proposal is grounded in the complementary principles that there is a strong correlation between population density and loop costs, and that areas with similar population density should be grouped into the same unbundled loop rate band."¹⁹²

¹⁹¹ The FCC's rules require us to "establish different rates for elements in at least three defined geographic areas within the state to reflect geographic cost differences" (47 C.F.R. §51.507(f).) In the First Proceeding, decided while that rule was stayed, we initially established only two zones: Zone 1 (called "major cities" and comprising loops served by central offices with a density greater than 1,500 loops per square mile) and Zone 2 (the remainder of the State). After the TELRIC rules were reinstated, we accepted Verizon's proposal to establish Manhattan as a separate zone.

¹⁹² FairPoint's Initial Brief, p. 2.

The Judge expressed sympathy for FairPoint's goal of promoting the development of local service competition in smaller cities, but he found that Verizon had shown FairPoint's proposals to be flawed in both theory and practice: "Among other things, there appears to be a very significant difference, not adequately recognized by FairPoint, between a densely populated area large enough to encompass an entire central office (or more) and one that constitutes only a portion of a central office that comprises as well areas of much lower density. I recommend rejection of FairPoint's proposals and continued use of three-zone deaveraging in the manner proposed by Verizon and seemingly acceptable to all other parties."¹⁹³ FairPoint and Broadview except.

FairPoint's brief on exceptions expresses support for the loop rates recommended for Zone 2 but believes it justified adoption of one of its alternative deaveraging plans. It does not repeat its arguments but responds only to the Judge's concern about deaveraging rates at a sub-central office level. It acknowledges the difficulties associated with any such arrangement, and urges us to consider implementing its alternative rate structure where the zones comprise distinct central offices.

Verizon responds that breaking out a suburban zone from the existing Zone 2 would substantially increase rates for the remaining rural customers; its analysis suggests those rates could go as high as \$36.62 per loop per month. It concludes that FairPoint's rate plan would benefit FairPoint but foreclose any possibility of competition in the rural parts of the State.

FairPoint has not shown that the potential benefits of further deaveraging outweigh its practical difficulties and unintended adverse consequences for rural areas. Its exception is denied.

Broadview says it supports the recommended decision's loop rates for Zone 1A (Manhattan) and Zone 2 (rest-of-state), but expresses concern over the recommended rate increase for

¹⁹³ R.D., p. 106.

Zone 1B (major cities), in which most of its customers reside. It asserts that "the prime driver to competitive growth is likely to be small to medium business, those businesses that are often located near or at the fringe of dense urban areas,"¹⁹⁴ in density zone 1B.

Verizon responds that Broadview offers no specific criticisms of the recommended decision's computation of rates for zone 1B and fails to meet the requirement of our rules¹⁹⁵ that exceptions specifically identify the basis on which they rest.

The increase to which Broadview excepts grows out of the fact that the existing Zone 1B rate is artificially low, for it was set in the First Proceeding before Zone 1 had been divided and reflects average costs for that entire zone. When Manhattan was broken out as a separate Zone 1A with a deaveraged, lower rate, the rate in Zone 1B was left unchanged instead of being increased to reflect the higher deaveraged costs in the remainder of the original Zone 1. That historical anomaly is now being corrected; and while Broadview's concern about the resulting Zone 1B increase is understandable, it points to no error requiring correction. Its exception is denied.

In its own brief on exceptions, Verizon notes the FCC's requirement that UNE rates be deaveraged into at least three defined geographic areas to reflect geographic cost differences, cites our conclusion in the First Proceeding that there were no significant geographical variations in the costs of elements other than loops, and explains that it proposed to continue that approach here. It believes the Judge accepted that proposal but did not say so explicitly and asks us to clarify the matter.

It seems clear that the Judge agreed with Verizon that only loop rates should be deaveraged; in any event, we clarify that that is our intention, except for the possible deaveraging of interoffice transport rates discussed below.

¹⁹⁴ Broadview's Brief on Exceptions, second unnumbered page.

¹⁹⁵ 16 NYCRR §4.10(c)(2)(iii) and (iv).

INTEROFFICE TRANSPORT

Interoffice transport facilities comprise large capacity cables and associated electronic equipment used to carry calls between switches. Within the broad category are dedicated transport--a facility purchased and used entirely by one CLEC--and shared transport, involving facilities used by more than one carrier, each of which pays for its share on a usage basis. The rates for shared transport are based on those for dedicated transport. Accordingly, though the issues disputed on exceptions pertain specifically to dedicated transport, their resolution affects rates for shared transport as well.

Ports Per Node

Verizon's dedicated transport cost study assumes 100% deployment of synchronous optical network (SONET) transport rings with 100% fiber facilities, a forward-looking technology. Each SONET ring provides 48 DS3 connections. AT&T contended that Verizon had understated the number of ports that must be used at each SONET node to provide the 48 DS3s, thereby overstating its investment per DS3 and, in turn, the cost of dedicated interoffice transport. More specifically, AT&T calculated, on the basis of Verizon's assumptions, that each node must have on average approximately 26 ports. (That figure was based on the need for 96 ports to support 48 DS3s, since each DS3 enters the ring at one node and departs it at another. Verizon asserted there were 3.76 nodes per ring, implying approximately 26 ports per node.) Verizon's study, however, assumed only 16 ports per node, thereby substantially overstating, in AT&T's view, the investment per DS3. In rebuttal, Verizon acknowledged the inconsistency identified by AT&T but maintained that even though its current network in fact has 3.76 nodes per SONET ring, its cost study network properly assumed 6 nodes per ring, equivalent to 16 ports per node. It claims to have used the figure of 3.76 nodes that characterizes its existing network only to calculate fiber costs (thereby understating them), but not to calculate SONET costs. The Judge

regarded Verizon's explanation as satisfactory and saw no need for any adjustment. WorldCom and Focal except.

Focal argues that Verizon's claim to have resolved the apparent inconsistency should be rejected because a six-node assumption artificially inflates costs; the assumption is inconsistent with anything observed in Verizon's existing network; and, most importantly, the record lacks evidence that a forward-looking network requires six nodes per ring. It suggests that Verizon proposes that figure in order to "avoid recognizing actual costs that reflect efficient engineering and reap enhanced profits by superficially inflating them."¹⁹⁶ It urges that rates be set on the basis of 26 ports per node--i.e., 3.76 nodes per ring--which it regards as demanded by efficiency, reality, and consistency. WorldCom likewise maintains that Verizon has not borne its burden of proof and that Verizon's explanation requires the assumption that its current network does not incorporate forward looking SONET technology and design.

In response, Verizon regards it as significant that AT&T, which initially advanced the adjustment, does not except. With regard to substance, it contends that there is no evidence in the record to challenge the six-node assumption and that the CLECs objecting to it have not borne their burden of going forward with a prima facie challenge. It disputes as well the premise that a higher number of nodes per ring is inefficient or costly, contending that larger rings (requiring more nodes) entail such efficiencies as less fiber and fewer connections between rings. In Verizon's view, the appropriate balance is a matter of engineering judgment, and the CLECs have offered no basis for challenging Verizon's engineers' judgment on the issue. It notes as well that the HAI Model contemplates very large ring sizes.

That a forward-looking network construct differs from the existing network is hardly surprising, and those differences alone certainly cannot invalidate it. But that type of

¹⁹⁶ Focal's Brief on Exceptions, p. 3.

difference is the only real basis offered here for contesting Verizon's otherwise reasonable forward-looking assumption. In addition, Verizon has responded credibly to the argument that its construct may increase costs. We see no reason to modify the Judge's conclusions on this issue, and the exceptions are denied.

Optional Digital Cross-Connect System

AT&T objected to Verizon's inclusion of a digital cross-connect system (DCS) on most dedicated transport circuits regardless of whether the CLEC wished to purchase it, arguing that the FCC had allowed CLECs to order dedicated transport and DCS separately; Verizon contended that the extent of its unbundling obligation was not within the scope of this costing proceeding and that no CLEC had yet requested an unbundled DCS product. The Judge directed Verizon to identify the costs of an unbundled DCS product here unless it could cite a conclusive determination that it need not offer the product. He added that Verizon was free to argue elsewhere against any such offering.

Verizon has submitted a calculation of its DCS costs but notes that the resulting rates are intended to apply only to the extent Verizon is obligated to offer the product. It reserves its right to raise issues regarding that obligation in other proceedings.

The CLEC Alliance replies that Verizon has failed to show that it was not obligated to offer the unbundled product pending decision in those other proceedings, and it asks us to order Verizon to provide it on an unbundled basis "until and unless Verizon can sufficiently demonstrate otherwise."¹⁹⁷ The CLEC Alliance's request is beyond the scope of the proceeding and is denied, without prejudice to its further consideration in appropriate forums.

¹⁹⁷ CLEC Alliance's Reply Brief on Exceptions, p. 13.

Fill Factors

Verizon used a 75% fill factor for interoffice transport. The CLEC Alliance recommended fill factors of between 80% and 90%, arguing, among other things, that even though the equipment installed to accommodate traffic growth might be utilized at a 75% rate, the density and volume of the New York City telecommunications market suggested that existing facilities accommodating existing traffic were likely at full capacity and that the overall fill factor ought to exceed 75%. Verizon's response referred to the need for adequate capacity to ensure a prompt response to orders, a concern the Judge acknowledged. The Judge concluded, however, that "the CLEC Alliance's arguments strongly imply a fill factor higher than Verizon proposed; once again it is important to remember that not only that Verizon bears the burden of proof, but also that in a forward-looking analysis, its own experience provides the starting point but not the conclusion."¹⁹⁸ He therefore recommended a fill factor of 80%; Verizon, WorldCom, and Focal except.

Verizon contends that the Judge offered no derivation or analysis for his higher number and that the witness relied on by WorldCom and the CLEC Alliance lacked engineering expertise and offered no evidence in support of his recommendation. It maintains that its 75% factor is based on the experience, expertise, and judgment of the people who actually build and operate the network and that the notion that utilization should be maintained at as high a level as possible will lead to installation delays and held orders. It points in this regard to our statement, in a recent opinion, that Verizon's efforts to reduce utilization levels were part of the measures taken to improve its performance in providing interoffice facilities.¹⁹⁹

¹⁹⁸ R.D., p. 148.

¹⁹⁹ Verizon's Brief on Exceptions, p. 50, n. 127, citing Cases 00-C-2051 et al., Verizon-New York, Inc. - Special Services, Opinion No. 01-1 (issued June 15, 2001), pp. 11-12.

In response, WorldCom charges that Verizon "demeans and ignores the analytical work performed by [the Judge] and [our] Staff,"²⁰⁰ and it defends its witness against Verizon's attack, noting his telecommunications experience as well as that of the witnesses sponsored by the CLEC Alliance. The CLEC Alliance argues to similar effect, contending that Verizon's recommendations derive "from the practical experience and technical judgment of people who have a traditional monopoly network design mentality that cannot escape inefficient engineering design constructs."²⁰¹ It reviews the basis on which its witnesses criticized Verizon's recommendation, asserting that the absence of spare capacity on the existing transport network is irrelevant in a forward-looking TELRIC network.

In their own exceptions, WorldCom and Focal urge higher fill factors than those recommended by the Judge. Focal disputes the Judge's implication that the CLEC Alliance had made a general recommendation for a fill factor between 80% and 90%; in fact, it recommended factors of 90% for most of the components involved. It argues as well that the Judge's recommendation of a remote terminal fill factor of 88% implies an interoffice transport fill factor of at least 90%, inasmuch as the interoffice system as a whole runs at nearly full capacity and has a higher utilization factor than RTs. Most importantly, in Focal's view, utilization rates should be highest for portions of the network with more highly concentrated traffic, such as the interoffice network. WorldCom likewise cites the specific fill factors proposed by the CLEC Alliance.

Verizon responds that the Judge was aware of the CLEC Alliance's fill factors and apparently intended the 80% recommendation as a compromise. It argues as well that the record lacks evidence supporting the comparative fill factor principles asserted by Focal and that there is no basis for

²⁰⁰ WorldCom's Reply Brief on Exceptions, p. 38.

²⁰¹ CLEC Alliance's Reply Brief on Exceptions, p. 15.

concluding that utilization levels for transport will necessarily be higher than for loop components.

The Judge's recommendation represents his considered assessment of the parties' positions, recognizing, once again, that there is no one "correct" fill factor. In our view, however, the fill factors offered by the CLEC Alliance, which for the most part were at 90%, should have weighed more heavily in that assessment and warrant a fill factor of 85%.

IOF Deaveraging

The CLEC Alliance called for deaveraged transport costs, on the premise that costs would be lower in higher density areas because of higher fill factors and other considerations. Verizon contended that if a separate Manhattan rate were established, it would have to reflect not only the lower costs associated with shorter transport distances but the added costs associated with the high complexity circuit design characteristic of Manhattan.

The Judge directed Verizon to include with its brief on exceptions an estimate of a deaveraged Manhattan dedicated interoffice transport rate, so a judgment could be reached on whether costs differ enough to warrant deaveraging. Verizon has done so, and it states that its analysis demonstrates that the costs of interoffice transport within Manhattan are higher than the statewide average. It adds that it opposes deaveraging in view of the administrative costs and the difficulty of applying deaveraged transport rates to routes that cross density zone boundaries.

WorldCom in response challenges Verizon's estimate, contending, among other things, that it neither demonstrates the claimed need for greater circuit complexity in Manhattan nor takes account of all the efficiencies available there. It asks that Verizon be directed to recompute a deaveraged transport rate reflecting an average ring length of no more than 3.8 miles.

The issues raised by WorldCom preclude adoption of a deaveraged rate on the basis of Verizon's estimate, and the

differences between the parties over whether Manhattan costs are higher or lower than average warrant a determination now that cost differences have not been shown to require deaveraged rates for this element. Parties may comment in greater detail on the matter within 30 days of the date of this order, and we will decide, on the basis of those comments, whether to pursue the matter further.

DSL COMPATIBLE LOOPS AND LINE SHARING

Introduction

Digital subscriber line (DSL) technology entails the use of specialized electronics that permit the transmission over copper telephone lines (as distinct from more advanced optical fiber) of high-speed data signals while at the same time allowing the customer to make ordinary voice calls. The technology takes several forms, collectively referred to as xDSL; of particular pertinence here are asymmetric DSL (ADSL) and high-bit-rate DSL (HDSL).²⁰²

"Line sharing," meanwhile, refers to an arrangement under which a CLEC is able to provide DSL data service over a loop that is also used by the incumbent carrier to provide retail voice grade service. The voice traffic is transported in the low frequency (0 to 4kHz) range of the loop; the data traffic is transported in the higher frequency spectrum above 4kHz.

Some rates for DSL and line sharing offerings were considered in two earlier accelerated tracks of this proceeding. In Opinion No. 99-12 (issued December 17, 1999)(the DSL

²⁰² More specifically, ASDL uses a twisted-pair copper loop; the asymmetry refers to its ability to support a much higher transmission speed to the customer than from the customer. Its use thus permits rapid downloading by a customer of information from the internet or other databases. HDSL uses either a two-wire or a four-wire copper loop; transmission speeds (which are the same in both directions) are much higher when the four-wire version is used. Verizon's tariff includes rates for ADSL loops and for two-wire and four-wire HDSL.

Opinion), we set rates for the nonrecurring charges and one recurring charge that Verizon had proposed for DSL loops. The rates were set on a permanent basis, in the legal sense of not being subject to refund or reparation, but we characterized them as "interim," inasmuch as they were expressly set for further examination here. Later, in Opinion 00-7 (issued May 26, 2000) (the Line Sharing Opinion), we set rates for line sharing. Those rates were made temporary, but "only with respect to quantitative matters that depend on the yet to be admitted [in Module 3] material. To the extent qualitative judgments regarding the applicability of various rate elements to line sharing [could] be made on the basis of the existing record their rate implications [were made] permanent."²⁰³

Among the issues under this heading is the propriety of Verizon's having priced DSL loops and line sharing on the basis of an all-copper loop architecture. The CLECs attacked that concept on the premise that doing so was inconsistent with the basing of all other UNE costs on a forward-looking, all-fiber feeder architecture and amounted to an unlawful violation of TELRIC requirements. Verizon argued that the use of copper was correct, inasmuch as DSL was an inherently copper-based technology that would not be needed in an all-fiber environment. We generally agreed with Verizon in the DSL Opinion and the Line Sharing Opinion, and Verizon insists that those decisions represent the "law of the case," warranting rejection of the renewed arguments to the contrary by Rhythms/Covad and the CLEC Alliance.²⁰⁴ One implementation issue with regard to that dispute remains before us on exceptions, along with various parties' concerns about some specific DSL and line sharing rates.

Copper Versus Fiber

As a practical matter, the issue of whether DSL loops should be priced on the basis of copper or fiber was rendered moot by Verizon's stated intention to price xDSL-compatible

²⁰³ Line Sharing Opinion, p. 17.

²⁰⁴ Verizon's Initial Brief, p. 169.

loops at the rate applicable to two-wire analog loops, despite what Verizon regards as the higher costs associated with the former. The recommended decision included, for informational purposes only, a distinct, higher rate for an ADSL copper link, and Rhythms/Covad ask for clarification that the rates for xDSL loops are, in fact, the same as the rates for analog loops. Verizon regards such clarification as unnecessary but unobjectionable, and we here provide it.

Covad asks as well that we not adopt any rate, even on an informational basis, for the ADSL copper link, asserting that Verizon provided no cost support for it and the recommended decision engaged in no analysis of it. AT&T likewise asserts that Verizon's copper cost claims were not subject to rigorous review and asks us to specify that we have not addressed their merits.

Verizon replies that its cost study for an all-copper loop was presented in detail and went unchallenged by any CLEC. It denies that its pricing proposal renders its cost analysis moot, noting that if the cost analysis had shown copper costs to be less than fiber, the pricing proposal would not have been adopted. It therefore asks us to adopt its cost estimate subject to any generally applicable adjustments.

Verizon's pricing proposal for DSL loops obviates detailed consideration of its all-copper loop proposal. There likewise is no need to specify a rate for an all-copper loop, even for informational purposes, and we shall not do so.

Loop Qualification Charge

Loop qualification refers to the process by which it is determined whether a particular loop can be used for DSL

transmission.²⁰⁵ Verizon offers several forms of access to that information. Its "mechanized loop qualification" service affords basic information on loop qualification by querying an electronic database. CLECs wishing additional information are offered "manual loop qualification" and "engineering query," which involve "checking other databases, performing automated [metallic line tests] on loops, and checking paper outside plant records (known as 'cable plats')." ²⁰⁶ These additional services incur additional charges.

The more costly forms of access are needed because the available mechanized databases are not fully populated. Rhythms/Covad therefore objected to the associated charges, arguing, among other things, that the charges require CLECs to cover the cost of correcting Verizon's failure to develop a proper database and that a forward-looking, TELRIC-compliant cost study would assume a market in which Verizon's network took account of the needs of its CLEC customers. The Judge analogized the issue to the house and riser asset inquiry charge, reasoning that while a strict TELRIC construct might contemplate the existence of a more comprehensive database, adopting that construct would incur the risk of assuming a fantasy record keeping system. He distinguished this issue, however, on the grounds that Rhythms/Covad's witness had credibly suggested that Verizon's compliance over the past 20 years with its own guidelines related to its databases would have resulted in more of the pertinent information being included. The Judge believed Verizon had established the

²⁰⁵ Copper loops often are equipped with devices that preclude their use to support DSL; the devices were installed in the past to enhance the network in various respects. If loop qualification determines that such devices are present, the loop must be "conditioned" to remove them. The Judge considered various issues related to loop conditioning, and those raising quantitative matters are discussed below under the heading of Nonrecurring Charges. Qualitative issues related to loop conditioning (R.D., pp. 155-157) are not raised on exceptions.

²⁰⁶ Verizon's Initial Brief, p. 180.

soundness of its historical procedures for developing its database, but he saw little assurance of the extent to which those procedures had been complied with. "In view of that failure of proof, and to provide additional incentive to develop the database as a tool that meets the CLECs' needs as well as Verizon's own needs as a retailer, [he recommended] a downward adjustment of 25% in Verizon's loop qualification charges."²⁰⁷

Verizon excepts, arguing that artificially lowering rates to provide it incentives violates the requirement that UNE rates be cost-based. In addition, it sees no evidence "other than the ipse dixit assertion of the Covad/Rhythms witness"²⁰⁸ that its database procedures were not complied with. It adds that the recommendation ensures that Verizon will not be able to recover its forward looking costs, makes no allowance for the cost of populating the database, and permits CLECS to avoid making a fair contribution to loop qualification costs.

In response, Rhythms/Covad note that Verizon did not cross-examine their witness on this issue and that the witness, a former Bell Atlantic outside plant engineer, has long experience and thorough knowledge of Verizon's practices. They regard the creation of incentives as fully consistent with TELRIC, for TELRIC replicates competitive pricing, which offers incentives to efficiency. They argue that the Judge's recommended rates are, in fact, above TELRIC, inasmuch as they require CLECs to pay for inefficient manual processes. And they dispute what they take to be Verizon's premise that it has been ordered to undertake a crash project to update its databases without being reimbursed for the associated costs; they assert that they seek not such a crash project but only charges that reflect efficient technology.

Once again, the Judge has reached a reasonable result on the basis of the record as a whole, including burden of proof considerations and evidence to which Verizon would assign little if any weight. But the evidence is undeniably there, and the

²⁰⁷ R.D., p. 160.

²⁰⁸ Verizon's Brief on Exceptions, p. 55.

Judge did not act unreasonably or unfairly in crediting it more than Verizon would. His reference to providing a needed incentive should be seen not as sanctioning a below-cost rate but as explaining why the rate was being set toward the low end of the range of reason for those costs.

Splitter Administration and Support Charge

As already explained, "line sharing" refers to an arrangement in which a CLEC is given access to the DSL transmission capability of a copper loop that is also used by Verizon to provide retail voice grade services. The voice traffic is transported in the lower frequency range and the data traffic in the higher frequency range; the voice and data traffic are routed to their respective switches through the use of devices referred to as "splitters." Two scenarios for the provisioning of line sharing were developed in the ongoing DSL Collaborative and were considered in Verizon's cost studies. In scenario A, the splitter is located in the CLEC's collocation space in Verizon's central office; in Scenario C, it is mounted on a relay rack located in Verizon's central office space. In both scenarios, the splitter is owned by the CLEC.

Verizon proposed a splitter administration and support charge (SASC) comprising ACF-type components: a network maintenance factor (to recover splitter repair, maintenance, and similar expenses) a wholesale marketing factor (to recover "product management, advertising and customer-interfacing functions associated with the wholesale market"²⁰⁹), and a support factor (to recover a range of support functions such as information management, research and development). Consistent with our decision in the Line Sharing Opinion, the network maintenance factor would not be applied in line sharing scenario A, inasmuch as the splitter would be located in the CLEC's collocation space and Verizon would incur no maintenance costs.

²⁰⁹ Verizon's Brief on Exceptions, p. 51.

Rhythms/Covad challenged the SASC on a variety of grounds. The Judge found that many of the arguments echoed more generic concerns about ACFs, particularly whether Verizon had adequately removed costs associated with its own retail activities. He held that those issues were adequately addressed by the recommended adjustments to ACFs generally, which would be applied here as well. The issue unique to splitters, he continued, was whether ACFs should be applied at all to an item of hardware in which Verizon itself has no investment. Verizon maintained that the CLECs' splitter investment was simply a surrogate base to which the ACF could be applied in order to recover real costs. The CLECs countered that doing so was fundamentally at odds with the theory underlying the construction of ACFs.

The Judge's finding on that issue is set forth at length because the parties' arguments on exceptions pay close attention to its wording:

It seems to me that the CLECs have the better of this argument. What is at stake is not consistency for its own sake--i.e., the claim that ACFs are applied to Verizon's investment and therefore should not be applied to CLECs' investment--but the possibility that the ACFs would have been calculated differently had the historical investment base included investment other than Verizon's own. In that event, the denominator of the ACF ratio would have been greater and the ACF correspondingly lower. But applying the existing ACFs to investment not owned by Verizon entails a clear risk of overrecovery.

This is not to say that Verizon incurs no costs in connection with line sharing of the sort recovered through the ACFs at issue. Its testimony shows that the costs (once those related to retail activities are properly removed) are real, though care must be taken to eliminate as well all costs related to relationships with equipment vendors. But despite its burden of proof, it has not proposed a reasonable way to identify and recover those costs; and recovery therefore should be disallowed.

Finally, with specific reference to the maintenance costs proposed to be recovered from Scenario C CLECs, Rhythms/Covad have not shown splitter maintenance costs to be de minimis. If Verizon can devise and present on exceptions a better cost estimation and recovery mechanism, those costs should be allowed.²¹⁰

On exceptions, Verizon suggests the Judge "appears to recommended a provisional disallowance of the proposed [administration and support] charge."²¹¹ Noting that the Judge acknowledged the reality of these costs (but expressing surprise at his recommendation that costs associated with equipment vendors be disallowed, seeing no risk of the double recovery warned of by the Rhythms/Covad witness inasmuch as the costs at issue here are included in a different account from those recovered elsewhere), it contends that the only real question is how the amount of the costs should be determined. Its answer is to recover these costs, like other expenses, through ACFs; and it sees no basis for the Judge's concern over applying ACFs to investment not included in the investment base used to compute them. It contends that as long as the expenses included in the numerator of the annual cost factor development match the investments included in the denominator, the resulting factor will properly reflect the relationship and may be applied to investments not included in the initial investment base. It nevertheless recomputes the ACFs on an investment base including aggregate CLEC splitter investment and finds only "an insignificant reduction"²¹² in the resulting wholesale marketing and support ACFs. (It does not provide the analogous calculation for the network factor because the allocation of splitters between scenarios A and C could not be determined by the briefing deadline.) Verizon argues that the recalculation "should eliminate the double recovery concern, and thus obviate

²¹⁰ R.D., pp. 171-172.

²¹¹ Verizon's Brief on Exceptions, p. 52.

²¹² Id., p. 54.

any basis for unjustly denying Verizon the recovery of what the RD concludes, correctly, are 'real' costs."²¹³

Rhythms/Covad argue in response that Verizon misunderstood the Judge's recommendation, which was to disallow so much of these charges as relate to the wholesale marketing and other support ACFs, but provide Verizon a further opportunity on exceptions only to estimate and propose a recovery mechanism for the maintenance costs to be recovered from scenario C CLECs. Instead, Verizon seeks to recover the entire SASC and fails to make the authorized specific showing with regard to maintenance costs. With specific reference to disallowance of vendor costs, Rhythms/Covad notes that Verizon's exception refers to an argument by their witness that was not raised in brief nor cited by the Judge. The Judge's point related to a different argument--that CLEC equipment suppliers perform product management, advertising, and customer interfacing functions with respect to the splitters and that Verizon is not involved in those processes--and Verizon does not address itself to that concern. Rhythms/Covad therefore urge rejection of the wholesale marketing and other support cost components of the SASC consistent with the Judge's recommendation, which Verizon has not shown to be flawed; and continued rejection of the maintenance cost component, inasmuch as Verizon has not responded to the invitation extended by the Judge with respect to those costs.

Rhythms/Covad's readings of the Judge's recommendations are more persuasive than Verizon's. The Judge's invitation to submit a better cost estimate and recovery mechanism was directed to maintenance cost components, and Verizon did not specifically respond. And his concern about vendor costs related to the CLECs' incurrence of those costs on their own.

That said, Verizon's recomputation of the pertinent ACFs in a manner reflecting inclusion of splitter costs in the denominator obviates the Judge's principal substantive concern

²¹³ Id.

on this point. If the ACFs are recomputed in this manner, and the SASC is further modified to eliminate costs related to relationships with equipment vendors, the charge may be imposed.

Line Sharing SAC Charges

The collocation service access connection (SAC) charge recovers the costs of providing the physical connection between a CLEC's collocated equipment and Verizon's network. The Judge accepted Verizon's argument that line sharing requires enough cabling to warrant the imposition of two SAC charges for each installation but that the charge should be premised on the use of 165 feet of cable in each instance, rather than the higher amount that Verizon suggested was supportable.

In its brief on exceptions, Verizon notes that the charge set in the Collocation module of this proceeding is, in fact, based on 165 feet of cable and no change is required. Verizon's point, which is uncontested, is correct.

Cooperative Testing

Cooperative testing refers to a joint effort by a Verizon technician and a CLEC technician to ensure, on the installation of a line sharing arrangement, that it is properly installed and working. Verizon proposed a charge of \$37.15 per loop for cooperative testing, which it regarded as cost based. Rhythms/Covad objected, contending that CLECs should not be required to pay for work and then pay for testing to make sure the work was performed; at a minimum, they suggested, the charge should be waived wherever the failure of a loop is Verizon's fault, and Verizon should bear the burden of identifying instances in which the charge may be imposed. The Judge held that line sharing involves use of a line already known to be carrying dial tone (in contrast to a stand-alone DSL installation, where a new line must be installed and tested), which "tends to negate at least one possible source of trouble that may be attributable to Verizon. In these circumstances, it seems reasonable to allow imposition of the cooperative testing charge; to provide for its waiver if the trouble is attributable

to Verizon; but to require the CLEC to bear the burden of showing a waiver to be warranted."²¹⁴

Rhythms/Covad except, disputing what they take to be the Judge's assumption that cooperative testing is used primarily for line sharing arrangements; they assert that it is intended primarily for use with stand-alone DSL loops in order to ascertain the presence of dial tone and the existence of continuity (that is, a complete circuit). Rhythms/Covad add that the absence of continuity is a serious problem in connection with stand-alone DSL loops and that the problem is attributable to Verizon, as the party responsible for making the necessary cross connections. Accordingly, and because cooperative testing helps Verizon identify its own provisioning errors, they assert that Verizon should bear the testing costs and the rate should be set at zero.

In his reply brief on exceptions, the Attorney General agrees with Rhythms/Covad's analysis and recommends that Verizon bear the cost of cooperative testing when deploying a new stand-alone line and that CLECs bear the cost in the line sharing context unless the CLEC can establish that the defect identified is one for which Verizon is responsible.

Verizon responds that although cooperative testing is used primarily with stand-alone DSL loops, it is also used occasionally for line sharing and it is only in those situations that the charge would be imposed. It adds that cooperative testing is nothing more than a normal quality assurance procedure, the costs of which should be recoverable.

The posture of this issue is somewhat peculiar: Rhythms/Covad except; the Attorney General supports their analysis; yet the Attorney General's ultimate recommendation is substantially the same as the Judge's. In any event, we are satisfied that the Judge drew a reasonable distinction between the stand-alone DSL context and that of line sharing. In the former, there should be no charge for cooperative testing; in

²¹⁴ R.D., p. 174.

the latter, the charge may be imposed but should be waived if the CLEC can show the flaw to have been Verizon's fault.

NONRECURRING CHARGES

Introduction

Nonrecurring costs (NRCs; the abbreviation refers as well to the nonrecurring charges intended to recover those costs) have been defined by Verizon as "one-time costs that are incurred in responding to a carrier's request for the initiation, change, or disconnection of service."²¹⁵ To state the matter most generally, the costs are determined by estimating the worktimes needed to perform the required activities and multiplying them by the appropriate labor rates. NRCs have been a nettlesome issue since Phase 2 of the First Proceeding and continue to be controversial here. The issues are both complex and important, inasmuch as CLECs regard NRCs as upfront impediments to market entry.

In Phase 2 of the First Proceeding, we found that Verizon had failed to meet its burden of proof with regard to NRCs and that the record could have justified rejecting its NRC presentation in toto. Doing so, however, would have been tantamount to finding that the costs at issue were zero, clearly an incorrect conclusion, and we therefore set reasonable placeholder NRCs at a level approximately 57% below Verizon's proposals.²¹⁶ Verizon's failures of proof related to both the forward-looking nature of its study and its method for estimating worktimes.

In Phase 3, Verizon proposed additional NRCs. We found that Verizon's estimating methods had been improved in some respects, and we approved several of the new NRCs. We rejected others, as to which the new estimating method had not

²¹⁵ Verizon's Initial Brief, p. 288.

²¹⁶ The basis for the 57% adjustment is set forth in the Phase 2 Opinion, pp. 53-54; in general, the adjustment represented the average effect of applying, in each work function for which Verizon had conducted a task oriented costing (TOC) analysis, the minimum rather than the mean TOC data point.

been applied. We also strengthened the procedure used to ensure that NRCs did not double recover costs already recovered through carrying charge factors.

In the present proceeding, Verizon claims to have presented studies designed to satisfy the earlier criticisms. Most of the studies were based on the nonrecurring cost model (NRCM); of the nine studies that did not rely on the NRCM, none is specifically controverted.²¹⁷

The Judge described Verizon's study in some detail²¹⁸; in general Verizon first determined worktimes using today's method of operations and then adjusted those results to reflect the effects of planned mechanization efforts. It therefore contended that the study was forward-looking, resulting in NRCs that often are substantially less than current costs, but it explained further that some activities will continue to require manual rather than mechanized work effort.

Noting the improvement in Verizon's NRC studies between Phase 2 and Phase 3 of the First Proceeding, the Judge found that Verizon's efforts to study its NRCs on a forward looking basis had been still further improved. He did not regard the studies as fatally flawed by their use of existing systems and costs as a starting point, holding that "the key is whether adequate steps have been taken to adjust that starting point to reflect reasonable forward-looking assumptions. Verizon's evidence details those steps, and they appear generally sufficient."²¹⁹ To the extent, however, that NRCs reflected continued use of UDLC technology, the Judge recommended that, like the corresponding recurring charges, they be set on that basis for now but they be reduced in a year to a level consistent with IDLC alone unless Verizon can show that step to be unreasonable.

²¹⁷ Verizon's Initial Brief, p. 289, n. 689, listing the nine non-NRCM studies.

²¹⁸ R.D., pp. 176-177.

²¹⁹ R.D., p. 181.

AT&T excepts to the Judge's general endorsement of Verizon's NRC studies and Verizon excepts to a number of specific adjustments related to NRCs for DSL service.

The Studies in General

Noting the substantial burden cumulatively imposed by NRCs on Verizon's competitors, AT&T argues that Verizon's current NRC submission suffers from the same principal flaw--its reliance on Verizon's existing embedded network--as the submission found unacceptable in Phase 2. According to AT&T, the adjustments made by Verizon in contemplation of planned network upgrades failed to reflect the TELRIC network that underlies its proposed recurring costs. As a result, AT&T contends, NRCs and recurring costs are based on fundamentally different network assumptions, something that TELRIC does not allow. AT&T therefore urges us to find that Verizon has again failed to sustain its burden of proof and to reject the proposed NRCs entirely; should we be reluctant to take that radical a step, AT&T would propose a disallowance of 40%.

Verizon responds that AT&T is merely reiterating arguments fully considered and rejected by the Judge and that his recommendation reflects a careful consideration of the evidence. It characterizes the proposal to reduce the costs by 40% as unlawful and unfair, noting that AT&T presented no affirmative case on NRCs, having offered only a critique of Verizon's studies that was refuted on rebuttal.

AT&T exception is denied. The Judge fully recounted both the history of the issue in the earlier proceeding and the basis on which he found Verizon's current studies to be generally acceptable. AT&T's arguments on exceptions offer nothing new on the point.

OSS Efficiency (Fallout Rate)

The fallout rate refers to the percentage of CLEC orders that cannot be processed electronically and that require more costly manual intervention. AT&T asserted that Verizon's study contemplated excessive fallout rates, as high as 25%--a

figure AT&T says it calculated for a 2-wire loop--and that in a properly designed system, the fallout rate should not exceed 2%. The CLEC Alliance noted that the 2% figure had been adopted in proceedings in Connecticut and Massachusetts; AT&T asserted that the record relied on in Massachusetts was similar to the one before us.

The Judge found that Verizon had not borne its burden of proving that its fallout rate was adequately optimistic. Noting that "fallout rates can be expected to decline as experience is gained with more efficient OSS, and [that] it is important that rates here be set on the premise of minimal fallout," he recommended adoption of the 2% fallout rate advocated by AT&T.²²⁰

Verizon excepts, arguing that there is no record basis for applying an across-the-board 2% fallout rate. It agrees that "minimal" fallout should be assumed but insists its studies do just that, using different levels of fallout, estimated by its experts, for different types of activities. Contending that AT&T offered no evidentiary support for the 2% figure, it suggests that AT&T was relying on a Southwestern Bell Telephone experience it had cited in other proceedings. That experience, in Verizon's view, is distinguishable, inasmuch as it pertained only to the service order function of simple residential retail service, which cannot be extended to other service categories.

AT&T replies that it in fact offered extensive testimony criticizing Verizon's fallout rates, including the testimony of a knowledgeable witness; it contends Verizon is again alleging "no evidence" when it means "evidence that it considers to be in one way or another insufficient." AT&T adds that the Southwestern Bell experience is a strawman set up by Verizon in its exception, for it had not been referred to by the Judge. The Judge referred, instead, to a Massachusetts decision that had been extensively quoted from in AT&T's reply brief and that Verizon's exception ignores.

²²⁰ R.D., p. 184.

Verizon contends as well that whether or not the 2% fallout rate is valid, the calculations accompanying the recommended decision applied it incorrectly in one instance, inasmuch as the software translation needed to connect a new UNE-P port and loop would always have to be performed manually. Verizon asserts that no party offered any evidence challenging that claim but that the calculations accompanying the recommended decision nevertheless reflect application of the 2% fallout rate to that activity. Even if the rate is generally adopted, it argues, it should not be applied here.

AT&T responds that Verizon again misrepresents the record, citing testimony by its witness that if a forward looking network construct and forward looking OSSs are assumed, no manual software translation would be needed to connect the new UNE-P port and loop.²²¹ Accordingly, AT&T contends, the adjustment was properly applied to that activity.

As AT&T points out, the Judge had ample record basis for his 2% fallout rate, and Verizon's general exception here is denied. Verizon's specific exception related to new UNE-P ports, however, is granted; manual software translation is indeed needed in connection with a new UNE-P installation, and AT&T has not shown the contrary.

Loop Conditioning NRCs

Rhythms/Covad contended that Verizon's study overstated the worktimes used in calculating NRCs. In particular, they questioned Verizon's assumption that loop conditioning work must proceed one loop at a time instead of through what it regarded as the more efficient process of deloading multiple loops, and they urged use of the time estimates proposed by their witnesses. Verizon contended that a proper analysis of multiple loop conditioning showed that it would pose service problems and significantly increase costs.

²²¹ AT&T's Reply Brief on Exceptions, p. 101, citing Tr. 1,573-1,578 and Exhibit 316.

The Judge found the record inconclusive in a variety of ways and treated the loop conditioning NRC as follows:

Deloading loops in batches of 25 or 50 may risk degrading service or increasing costs in the manner warned of by Verizon; but deloading only one loop at a time does not appear absolutely essential to system integrity or cost minimization, and might itself jeopardize system integrity by requiring more frequent opening of enclosures.²²²

To state the matter differently, Verizon has not borne its burden of proof with respect to its proposed charges, but it has shown ample qualitative reason why the charges should not be reduced to a level consistent with the worktimes advanced by Rhythms/Covad. To reflect the state of the record before me, I conclude that Verizon should recompute its worktimes on the premise that loops are deloaded on average in batches of ten, thereby capturing some of the efficiencies that may be available through multiple deloadings while recognizing the difficulty of extending that premise too far.²²³

Verizon excepts, arguing that it conclusively refuted Rhythms/Covad's 25- or 50-loop proposal and that the Judge's 10-loop proposal poses, to a somewhat lesser extent, the same difficulties and lacks any basis in the record. According to Verizon, multiple deloadings could degrade or cause a loss of service and would generate additional costs to reload loops in the event they were not used for DSL service and were rededicated to voice grade service. Verizon points as well to what it characterizes as unrefuted evidence that, for a variety of technical reasons, there would be only few instances in which

²²² Without intending to belittle concerns about service quality, I cannot help but note that such warnings have a long history of overstatement, going all the way back to pre-divestiture AT&T's objections to competitive customer premises equipment. (Footnote in R.D.)

²²³ R.D., pp. 188-189 (footnote omitted).

multiple deloadings could be performed, and it contends that while the evidence was directed toward the proposed 25- or 50-pair deloading, it applies as well to the Judge's 10-loop proposal. A 10-loop premise, accordingly, requires assuming unachievable economies of scale and produces rates far below cost. Verizon contends further that the Judge ignored its arguments that rates premised on multiple deloadings pose troublesome cost recovery and rate design issues, given that customers typically do not request loops in multiples of ten. Finally, Verizon contends that despite his claim not to have belittled concerns about service quality in invoking pre-divestiture AT&T's objections to competitive customer premises equipment, the Judge did in fact do just that, discounting Verizon's specific testimony on the service quality problems posed by multiple deloadings.

In response, Rhythms/Covad dispute Verizon's claim that its evidence was unrefuted and suggest the Judge chose a middle ground that reflected his assessment of the relative strengths of the opposing bodies of evidence. They review the testimony of their witnesses explaining how multiple loop conditioning could be accomplished, noting that Verizon did not cross-examine these witnesses. They contend that their witnesses' testimony established, among other things, that multiple loop conditioning is consistent with modern cable splicing technology and that single-loop conditioning can degrade service by causing wire insulation to deteriorate.

The Judge fully explained how he reached his conclusion on the basis of the record as a whole, and while Verizon's arguments on exceptions urge a different reading of that record, they do not require it. Verizon may be correct to argue that, in many instances, it will have to condition one loop at a time, but there will likely be instances--such as multiple occupancy residential buildings--in which more than 10 loops may be conditioned at once. The 10-loop premise balances those factors as well, and Verizon's exception is denied.

DUCTS AND CONDUITS

Introduction, Background, and Legal Context

Ducts and conduits differ from nearly all of the other products considered in Module 3 of this proceeding in that they are not classified as UNEs pursuant to the 1996 Act and are not required by federal law to be priced in accordance with TELRIC. Indeed, the FCC method for pricing ducts and conduits (which is not binding on the states) is based on historical costs, and CTTANY urged its use. Verizon, in contrast, urged that conduit rentals, like UNE rates, be set on a forward-looking TELRIC basis, a proposal that would increase the rates very substantially from their present levels, set in 1970 on the basis of historical costs. The Judge provided a detailed description of the background and legal context for duct and conduit pricing²²⁴; for convenience, we note here the following highlights:

- The federal statute grants the FCC authority over rates for pole attachments (defined to include ducts and conduits), but exempts from that authority any case in which a state regulates pole attachments and certifies to the FCC that it does so in a manner that "consider[s] the interests of the subscribers of the services offered via [the pole] attachments as well as the interests of the consumers of the utility services."²²⁵ New York has so certified.
- The FCC has several times determined that rates for pole attachments, ducts and conduits should be set on the basis of the utility's historical costs. It did so most recently in the "Reconsideration Order" issued in May 2001.²²⁶

²²⁴ Supplemental R.D., pp. 2-5.

²²⁵ 47 U.S.C. §224(c)(2)(B).

²²⁶ Amendment of Rules and Policies Governing Pole Attachments and Implementation of §703(e) of the Telecommunications Act of 1996, CS Dockets No. 97-98 and 97-151, Consolidated Partial Order on Reconsideration (rel. May 25, 2001)(the Reconsideration Order).

- Section 119-a of the Public Service Law, enacted in 1978, grants us authority over rates for pole attachments and use of ducts and conduits and specifies certain guidelines to be followed in setting those rates.
- In our 1997 "Pole Attachment Opinion," we determined that we should exercise our authority over pole attachment rates by adopting the FCC's historical cost method. In so doing, we noted the need for "cooperative federalism" and the usefulness of avoiding unnecessary variation in regulatory requirements, all for the purpose of bringing customers the benefits available from the development of competitive markets.²²⁷
- Verizon argued, in connection with the proposed inclusion of duct and conduit pricing in Phase 3 of the First Elements Proceeding, that our adoption of the FCC's method for pole attachment pricing applied to ducts and conduits as well. It attributes its change of position since then to its "comprehensive review and re-evaluation of costing and pricing issues" in the present proceeding.²²⁸

More specifically, Verizon asserted that its current rate of 75¢ per foot per year is grossly understated, inasmuch as it was set in 1970 on the basis of even earlier costs and has not been changed since; it noted that the rate was far below the corresponding rates in other states within its footprint. Verizon proposed a forward-looking costing method that takes account of the current cost of construction for new conduit systems. The rates resulting from Verizon's study (and the current rates for comparison purposes) are as follows:

²²⁷ Case 95-C-0341, Pole Attachment Issues, Opinion No. 97-10 (issued June 17, 2001).

²²⁸ Verizon's Initial Brief, p. 219, n. 501.

	Conduit Rates (per duct-foot)		
	Current Rate	Verizon Proposed	Verizon
Proposed	(Statewide)	Major Cities ²²⁹	Rest-of-State
Main Conduit ²³⁰	\$0.75	\$6.22	\$5.41
Subsidiary Conduit	\$1.40	\$9.49	\$7.68

CTTANY's analysis, based on the FCC's historical cost method, began with publicly available ARMIS data on embedded costs, used those data to calculate a net investment figure, and divided that figure by total system length to arrive at the net linear cost of conduit. In calculating net linear cost, it relied not on ARMIS data, which it regarded as unreliable, but on information available from Verizon's continuing property records (CPR); that controversial step is discussed in greater detail below. On the basis of its analysis, CTTANY calculated a maximum rate per foot of 80¢.

The Judge determined, for reasons described below, that ducts and conduits should be priced on the basis of the FCC's method, as CTTANY urged, but without application of CTTANY's adjustment reflecting the use of CPR data. On that basis, he calculated a per-foot cost of \$1.50 per duct-foot. Verizon excepts to the rejection of its forward-looking costing method and to the Judge's further recommendation that rates be set, in some situations, on the basis of a CLEC's use of less

²²⁹ Verizon's study did not include Manhattan (or the Bronx), where ducts and conduits are owned not by Verizon but by its wholly-owned subsidiary, Empire City Subway, Limited. Empire City Subway, which offers conduit space to Verizon and other carriers on a nondiscriminatory basis, is regulated by the New York City Department of Information Technology and Telecommunications.

²³⁰ "Main conduit" refers to a bank of conduit that directly connects two manholes or a central office vault and a manhole, along with certain associated equipment. Subsidiary conduit refers to conduit extending from manholes to poles or buildings (other than central office buildings) that is needed to extend underground cables to connections with either aerial or block cables.

than one-half of a duct. CTTANY excepts to the Judge's rejection of its CPR-based adjustment.²³¹

Historical vs. Forward-Looking Costs

After describing the parties' arguments at some length²³² the Judge recommended use of the FCC's historical-cost method for setting duct and conduit prices. He agreed with Verizon that we were not bound by the FCC's method and that PSL §119(a) need not be read to require basing prices on historical costs, but he rejected Verizon's policy arguments in support of forward-looking pricing. He reasoned as follows:

Essentially, Verizon insists on the need for consistency between the pricing of conduit rentals on the one hand and of UNEs on the other. But the FCC, the author of TELRIC pricing for UNEs, appears to see no need for that consistency, having very recently reaffirmed historical-cost-based pricing of poles and conduits; and this Commission, as a matter of discretion, has deferred to the FCC in this regard, at least with respect to pole attachments. I see no reason why conduits, whose function is analogous so that of poles, should be treated any differently from them, and the Commission's decision in Opinion No. 97-10 seems controlling here. That, indeed, was Verizon's own position in the First Elements Proceeding, and its attribution of its changed position only to its "comprehensive review and re-evaluation of costing and pricing issues" inevitably suggests a degree of result orientation.

Beyond that, it does not appear that forward-looking duct and conduit technology

²³¹ The Judge resolved a number of additional issues that are not pursued further by the parties on exceptions and, in general, are not discussed further here. Of these, we note only the Judge's rejection, on various legal grounds, of CTTANY's proposal that we assume jurisdiction over the rates charged by Empire City Subway. The Judge's treatment of the issue is consistent with precedent and law and we explicitly affirm it.

²³² Supplemental R.D., pp. 8-13.

differs all that much from historical. In contrast to the UNE situation, this is not a case where TELRIC pricing is needed to avoid imposing on CLECs the costs associated with the incumbent's embedded plant (and embedded inefficiencies). Verizon's plea for consistency between UNE pricing and duct and conduit pricing fails to take account of the differences between the two products.

Accordingly, I see no basis for recommending what would be, in effect, a reversal of Commission precedent. Consistent with the Commission's earlier determination with respect to pole attachments, rates for duct and conduit rentals should be set, following the FCC's method, on the basis of historical costs.²³³

On exceptions, Verizon stresses the gap between the Judge's recommended rate of \$1.50 per duct-foot per year and its calculated forward-looking costs ranging from \$5.41 to \$16.56. Arguing that consistency and fairness require pricing ducts and conduits on the basis of TELRIC as long UNEs are priced on that basis, Verizon suggests that departing from TELRIC in the one instance where it produces higher rates "would sacrifice principled decision-making to blatant result orientation, and would highlight the uncompensated taking effected in this proceeding."²³⁴

In addition to being demanded by fairness, Verizon argues, consistent pricing for stand-alone conduit²³⁵ and for loops is required by economic logic, for only if prices are consistent will CLECs make economically efficient choices

²³³ Supplemental R.D., pp. 14-15.

²³⁴ Verizon's Brief on Exceptions, p. 2. (Unless otherwise specified, citations in this section of the order are to the briefs and reply briefs on exceptions to the supplemental recommended decision.)

²³⁵ Stand-alone conduit, at issue here, is conduit offered by Verizon as a product to CLECs that wish to run their own cable through it. Conduit is also included as part of the supporting structure for loop and transport plant, in which event its costs are recovered through the appropriate UNE rates.

between buying unbundled loops from Verizon and deploying their own loop plant in Verizon's conduit. The Judge noted that the FCC appeared to see no need for that consistency; Verizon suggests the FCC did not consider the question. Verizon adds that forward-looking pricing would permit us to deaverage conduit rates on the same geographic basis as loops and to set separate rates for main and subsidiary conduit, refinements not available under the FCC's method and that might work to the CLECs' advantage inasmuch as subsidiary conduit costs are higher but, according to CTTANY, its constituents for the most part use main conduit.

Asserting that the Judge relied primarily on the Pole Attachment Opinion in recommending use of the FCC method, Verizon argues against "blind adherence to precedent."²³⁶ It contends the earlier decision was directed only to poles and not to conduit and that we recognized the potential distinction in requiring Verizon to submit forward-looking cost studies for consideration here; just as the Phase 1 UNE rates are up for reexamination here, it adds, so should we reexamine the contemporaneous decision regarding poles. In its view, the perceived need for consistency and "cooperative federalism" that we cited in choosing the FCC method for poles should not be decisive here, inasmuch as rates set in various states on the basis of the FCC formula would not necessarily be uniform and any such uniformity that might be achieved would be at the expense of the more important uniformity between conduit and loop rates: "Unbundled loops and stand-alone conduit are, to some extent, economic substitutes for each other. Conduit in New York and conduit in New Jersey are not substitutable in this fashion."²³⁷ Verizon acknowledges that it took an opposite view on this issue in 1998 but regards as unwarranted the Judge's suggestion that its change of position "inevitably suggests a degree of result orientation"; it cites, rather, the cogency of

²³⁶ Verizon's Brief on Exceptions, p. 5.

²³⁷ Id., p. 7.

the arguments now presented in favor of consistent costing methods.

Finally, Verizon reiterates its effort to refute, point-by-point, the FCC's reasoning in support of its decision to price conduit on the basis of historical costs. The arguments were presented to the Judge and summarized by him as follows:

- The FCC cited stability and simplicity in support of maintaining the status quo; Verizon sees no reason to exempt conduit from the rate changes contemplated in this proceeding and sees no reason for simplicity to be a decisive consideration.
- The FCC noted the complicated procedures that would be needed to develop a new, forward-looking ratemaking formula; Verizon points out that this proceeding has already done so.
- The FCC held that the advantages of forward-looking pricing were likely to be less pronounced in the pole attachment context; Verizon regards that contention as baseless, arguing that even though conduit facilities are not built or replaced on a unit-by-unit, as-needed basis, new conduit does need to be built as demand expands.
- The FCC noted the absence of any congressional directive to deviate from the use of historical costs; Verizon reiterates its point that the FCC's regulations are not binding here.
- The FCC noted that its notice has not specifically raised the possibility of moving to forward-looking costing; Verizon notes that this procedural objection likewise is inapplicable here.²³⁸

In sum, Verizon argues that neither precedent nor policy warrants doing anything other than exercising our discretion to

²³⁸ Supplemental R.D., pp. 8-9.

price ducts and conduits on a TELRIC basis as long as UNEs are so priced.

If Verizon in its exception points to the small increase recommended by the Judge over the rates set in 1970, CTTANY in reply emphasizes the very large percentage increase now sought by Verizon--between 621% and 729% for main conduit and between 449% and 1,083% for subsidiary conduit. In support of its position that historical cost pricing should be retained, it argues, first, that forward-looking costs are not a proper basis for conduit pricing. It contends, in this regard, that Verizon constructs conduit for its own use and rents only excess capacity to cable operators; that Verizon is reimbursed through make-ready charges for the cost of modifying existing plant to accommodate additional facilities; that conduit plant is nowhere near exhaustion; that conduit differs from UNEs in that its technology is relatively static; and that forward-looking pricing is not needed to provide consistent price signals inasmuch as cable operators already occupy the conduit and will not abandon their facilities-based service in favor of leased UNE arrangements. It disputes Verizon's suggestion that geographical deaveraging would produce more favorable rates, and it denies Verizon's claim that there is no need for interstate consistency, arguing that investment decisions are based on characteristics of the geographic market and that we recognized, in the Pole Attachment Opinion, that investment in New York would be promoted by reduced barriers to competition.

CTTANY points as well to our Staff's informal rejection, over the years, of Verizon's arguments that forward-looking pricing was consistent with PSL §119(a),²³⁹ and it contends that the thoroughly litigated factors that led us to adopt the FCC's method for pricing poles in 1997 remain equally valid today. It notes the FCC'S recent reaffirmance of its

²³⁹ The Judge held that §119-a "need not be read to require basing prices on historical costs." (Supplemental R.D., p. 14.) We need not reach that issue, inasmuch as we are deciding, on other grounds, to base prices on historical costs.

position and its explanation there of the differences between poles and conduits on the one hand and UNEs on the other.²⁴⁰

CTTANY asserts as well that Verizon ignores the substantial body of law regulating poles and conduits as essential facilities and rejecting the use of forward-looking costing; and it says that Ameritech, a similarly situated incumbent LEC, recently proposed pricing based on historical costs in an Illinois proceeding.

RCN, in its late filed reply, argues to similar effect, pointing to the distinctions drawn by the FCC between poles and conduits on the one hand and UNEs on the other. It adds that TELRIC is intended to produce prices that are lower than those based on historical costs--a point it says Verizon itself makes in its brief to the Supreme Court in the TELRIC litigation--and that the FCC chose that policy "to foster competition by easing the financial impact of entering a marketplace that a monopoly provider controls and manipulates."²⁴¹ Verizon's pricing plan, which would dramatically increase existing duct and conduit rates, would have just the opposite effect. RCN points as well to the importance of following precedent, and it sees no public interest rationale for deviating from the policy of cooperative federalism we adopted with regard to pole rentals.

The arguments on exceptions add little to the thorough airing this issue received before the Judge, and we are satisfied that he properly resolved it. Verizon's exception is denied not out of "blind adherence" to precedent but because the precedent was sound when adopted; remains so now (as the FCC, too, recently held yet again); and deserves to be extended to ducts and conduits, which have more in common with pole attachments than with UNEs.

²⁴⁰ It cites the FCC's Reconsideration Order, ¶¶15-25.

²⁴¹ RCN's Reply Brief on Exceptions, p. 3, citing Local Competition Order ¶¶705-706.

Use of CPR Data Rather Than ARMIS

In applying the FCC's method, CTTANY used certain data from Verizon's continuing property record, rather than the ARMIS data on which Verizon relied, to determine the number of duct-feet over which net conduit investment should be spread. Verizon objected to CTTANY's recourse to those data and to the manner in which it had used them. The Judge agreed with Verizon, and CTTANY excepts.

The Judge set forth the full background for the issue.²⁴² Briefly, it should be understood that conduits are structures that provide physical protection for cables. They may consist of one or more ducts, which actually carry the cables. The term "duct-feet" refers to the total length of duct work in the network, while "trench-feet" or "conduit-feet" refers to the total length of the trenches in which the conduit is buried. The relationship between conduit-feet and duct-feet depends on the average number of ducts buried in each trench.

On the basis of ARMIS data, Verizon calculated a total of 265.5 million duct-feet in its network. That figure, together with a net conduit investment of about \$903 million, produced a net investment per duct-foot of about \$3.40. But ARMIS data showed a duct-to-conduit ratio of 3.8, which CTTANY saw as out of line with the average ratio of 5.74 in the remainder of the former Bell Atlantic footprint. It therefore turned to Verizon's continuing property record, a detailed physical inventory system that CTTANY regarded as more accurate; it noted that the FCC method generally relied on publicly available reports such as ARMIS but permitted use of more accurate data when available. CPR data showed the average number of ducts per main conduit to be 7.91, which CTTANY reduced to 7.21 ducts per conduit to recognize that subsidiary conduit usually held only two ducts. It calculated that adjustment by taking account of the ratio of main to subsidiary duct derived from Verizon's CPR.

²⁴² Supplemental R.D., pp. 17-18.

On that basis, CTTANY computed a higher number of duct-feet and a consequently lower investment per duct-foot. After describing the parties' arguments in detail,²⁴³ the Judge found CTTANY's adjustment flawed:

Verizon's challenge to CTTANY's adjustment is persuasive. In effect, CTTANY is double-counting the greater number of ducts in main conduit: once to determine the weighting to be afforded main conduit and once to determine the number of ducts to which the weighting is to be applied. The proper weighting would be on the basis of main and subsidiary trench-feet, and that weighting would then be applied to the larger number of ducts in main conduit, thereby recognizing that larger number only once. As Verizon has shown, that correct weighting produces, as would be expected, a cost per duct-foot identical to the one produced by simply dividing net investment by the number of duct-feet. Accordingly, I recommend that the rate be set on the basis of the FCC method, using a cost per duct-foot calculated by dividing net investment by the number of duct-feet shown in the ARMIS data, and without reference to the CPR data.²⁴⁴

On exceptions, CTTANY maintains that the Judge rejected the best evidence of the number of ducts per conduit, relying, instead, on a questionable number derived from the ARMIS data. It argues that, in an analogous context, pole attachment rates take account of the usable space on poles, something that may be determined from CPR data. CTTANY goes on to reiterate its comparison of the ARMIS-based figure of 3.8 ducts per conduit in New York with the 5.74 ducts per conduit average; asserts that Verizon has provided no evidence to explain the discrepancy; and notes that most of the other states within the Verizon footprint have ratios that cluster around the mean. It contends as well that Verizon's critique of CTTANY's weighting of main and subsidiary conduit implies the impossible

²⁴³ Supplemental R.D., pp. 19-20.

²⁴⁴ Supplemental R.D., p.21.

result that subsidiary conduit has less than one duct. CTTANY goes on to argue the inherent accuracy of CPR data, noting that even though it uses 1994 plant data, the plant is long-lived and its physical characteristics are not like to have changed. CTTANY charges that Verizon mischaracterized its calculations and adheres to ARMIS data demonstrated to be inaccurate; and it criticizes the Judge for accepting the ARMIS data "rather than drawing a negative inference from Verizon's stonewalling, and its insistence on using a figure that cannot be correct."²⁴⁵

Verizon responds that the issue to be determined is the cost of conduit investment per duct-foot and that the average number of ducts per conduit is irrelevant to that issue. The needed answer can be obtained directly by dividing total net investment by total duct-footage, and the latter figure can be obtained easily from ARMIS. The figure can be obtained from CPR data as well, and the CPR duct-footages are consistent with the ARMIS duct-footages. The ARMIS data, however, are more current. Rather than use this direct approach, Verizon argues, CTTANY used an indirect approach that first calculates net investment per trench-foot and then converts that figure into an investment per duct-foot. Verizon reiterates its efforts to show the fallacies in CTTANY's calculations, adding an explanation of the artifact, noted by CTTANY on exceptions, of less than one duct in subsidiary conduit. But Verizon sees no need even to consider that indirect approach and the complexities it entails, given the ready availability of the direct analysis.

The Judge fully explained his finding that CTTANY's analysis was flawed, and nothing in CTTANY's brief on exceptions rehabilitates the analysis. Verizon properly notes that the exercise here is a simple one--dividing conduit investment by the total number of duct-feet--and that the number of duct-feet suggested by ARMIS data and the number of duct-feet suggested by CPR data are not very different. Why the number of ducts per conduit in New York appears to be below the footprint average has not been conclusively explained, but Verizon has identified

²⁴⁵ CTTANY's Brief on Exceptions, p. 8.

a number of factors that may account for it. More importantly, the ratio is not really germane to the exercise at hand, and there is in any event no basis for replacing it with a ratio that is almost as far above the average as it itself is below. CTTANY's exception is denied.

Half-Duct Presumption

To facilitate calculation of a rate reflecting the percentage of conduit capacity occupied by an attachment, the FCC adopted, and reaffirmed in the Reconsideration Order, a rebuttable presumption that the attacher occupies one-half of a duct.²⁴⁶ Unless the presumption is rebutted, the attacher is charged a rate based on one-half of the calculated cost per duct-foot. The FCC added that "when the actual percentage of capacity occupied is known, it can and should be used instead of the one half duct presumption," and that "the presence of inner duct is adequate rebuttal. Where inner duct is installed, either by the attacher or in a previous installation, the maximum rate will be reduced in proportion to the fraction of the duct occupied. That fraction will be one divided by the actual number of inner ducts in the duct."²⁴⁷

In light of those provisions, CTTANY presented rates for a full duct, a half duct, one-third of a duct, and one-quarter of a duct, to be applied depending on the number of inner ducts installed. Verizon objected, contending that the half-duct premise should be applied inasmuch as "Verizon would not, except in extraordinary circumstances, occupy the same duct as a CLEC."²⁴⁸ In its own study, Verizon calculated rates for a whole duct and a half duct only, and it considered that a reasonable compromise between its interests and the CLEC's. CTTANY contended, however, that where inner duct is used, the attacher typically occupies less than half of the duct and that the FCC's

²⁴⁶ Reconsideration Order, ¶¶95-98 and history there cited.

²⁴⁷ Reconsideration Order, ¶98.

²⁴⁸ Verizon's Reply Brief, p. 120, citing Tr. 5,756-5,757.

provision for rebutting the half-duct presumption recognizes that reality.

The Judge found no reason to question the FCC's premise that the presence of inner duct rebuts the presumption that the attacher occupies half a duct, and he therefore recommended adoption of CTTANY's proposal to develop rates that assign a correspondingly lower proportion of the total cost to the attacher and to set the rate on the basis of the number of inner ducts present. Verizon excepts.

Verizon argues, first, that developing different rates for different fractional occupancies would be difficult administratively and would impose additional costs, such as those related to inventories of inner ducts. Moreover, it regards fractional rates as unnecessary to insure fair cost allocation, given that it rarely occupies the same duct as a CLEC and that a CLEC occupying an inner duct in effect uses the entire duct. As a practical matter, moreover, its standard practices limit the number of inner ducts to two or three, and the placement of more than three ducts will be even rarer in the future, as cable sizes are increased to include larger numbers of fibers. The two-inner-duct case is covered by Verizon's half-duct proposal, and where three inner ducts are present, one of those ducts would be a maintenance spare, the cost of which should be shared by the occupiers of the duct.

In response, CTTANY cites testimony by Verizon to the effect that modern conduit construction allows for placement of three or four inner ducts, and it points out that even though Verizon may choose not to share a duct with a CLEC, it retains custody over the inner ducts and has the option to lease them to other attachers. It sees no basis for Verizon's administrative objections, asserting that where the number of inner ducts cannot be determined, the FCC formula uses the half-duct rate. Finally, CTTANY characterizes as "ludicrous"²⁴⁹ Verizon's argument that one inner duct should be excluded from consideration as a maintenance spare, seeing no evidentiary support for such

²⁴⁹ CTTANY's Reply Brief on Exceptions, p. 12.

treatment. In any event, it says, the FCC took the view that even a spare constitutes part of conduit capacity.

Verizon's objection raises no theoretical arguments not presented to and rejected by the Judge. Its novel arguments are that rates for fractions of a duct less than one-half are unnecessary and administratively burdensome. But administrative burden is unproven, particularly if the half-duct presumption prevails in the event the number of inner ducts cannot be determined. And if the rate turns out to be unnecessary, it will simply not be imposed. The Judge reasonably followed the FCC's premise that the presence of inner duct rebuts the presumption of half-duct occupancy, and Verizon's exception is denied.²⁵⁰

OTHER ISSUES

UCRCC

The unbundled CLEC reciprocal compensation charge (UCRCC) is intended to compensate Verizon in situations where it receives certain types of calls from the CLEC for hand off to a second CLEC and must make reciprocal compensation payments to that second CLEC. Verizon calculated the charge on the basis of average actual payments over the period September 1999 through December 1999, and the Judge directed it to recalculate the rate in its brief on exceptions on the basis of a longer sample period terminating more recently. Verizon provides the updated data and a revised rate in its brief; the rate is lower than that initially calculated.

AT&T requests in response that we direct Verizon to update the UCRCC data and rate on a quarterly basis, inasmuch as these payments likely will continue to decline. WorldCom argues

²⁵⁰ In its reply brief on exceptions, CTTANY asks us to "accept the RD's decision to adopt the FCC half-duct presumption." (CTTANY's Reply Brief on Exceptions, p. 12.) For the sake of clarity, it should be noted that the half-duct presumption was not challenged by Verizon; its exception related to the Judge's recommendation of the FCCs further point, that the presence of inner duct sufficed to rebut the half-duct presumption and warrant application of a smaller fraction.

that even the recalculated rate is inconsistent with TELRIC, inasmuch as it reflects historical experience instead of being derived on the basis of new TELRIC-based transport and switching rates. It urges that the UCRCC be set equal to Verizon's tariffed reciprocal compensation rates that result from this proceeding; to do otherwise, it argues, would allow Verizon to recover from the originating CLEC more than it would pay to the terminating CLEC for carrying the traffic.

AT&T's request that this rate be updated quarterly is something Verizon has already agreed to,²⁵¹ and it seems warranted in view of the ongoing changes in these figures. It is adopted. WorldCom's proposal to change the nature of this charge raises concerns that may be reasonable but is offered for the first time in its reply brief on exceptions. Parties may comment on it within 30 days of the date of this order, and we will then determine whether to pursue the matter further.

OS/DA Rate

Verizon notes that the Judge accepted its proposal for pricing operator services/directory assistance, which is not a UNE, on a flexible basis using TELRIC costs as the lower bound and a market based rate at the upper bound. The rate appendix to the recommended decision, however, provides only an adjusted TELRIC rate, and Verizon therefore asks for clarification that its proposal is approved. We provide that clarification, which is opposed by no party.

The Commission orders:

1. To the extent they are consistent with this order, the recommended decision and supplemental recommended decision of Administrative Law Judge Joel A. Linsider, issued May 16, 2001 and June 18, 2001, respectively, are adopted as part of this order. Except as here granted, all exceptions to those recommended decisions are denied.

²⁵¹ Verizon's Initial Brief, p. 274.

2. Within 20 days of the date of this order, Verizon New York Inc. (Verizon) shall file tariff amendments consistent with this order. Upon filing those tariff amendments, Verizon shall serve copies on all active parties to this proceeding. Any party wishing to comment on the tariff amendments may do so by submitting 10 copies of its comments to the Secretary within 15 days of the date the amendments are filed. The tariff amendments shall not take effect on a permanent basis until approved by the Commission but shall be put into effect on a temporary basis on ten days' notice, subject to refund if found not to be in compliance with this order.

3. For good cause shown, the requirement of newspaper publication of the tariff amendments is waived.

4. Judgment is reserved as to the matter of possible refunds with respect to temporary switching rates.

5. Parties wishing to comment on the matters set by this order for further comment (i.e. possible geographic deaveraging of interoffice transport rates and possible modification of the unbundled CLEC reciprocal compensation charge) shall submit fifteen copies of their comments to the Secretary within 30 days of the date of this order.

6. This proceeding is continued.

By the Commission

(SIGNED)

JANET HAND DEIXLER
Secretary

APPEARANCES

FOR VERIZON NEW YORK, INC.:

Joseph A. Post, Esq. and Thomas M. Farrelly, Esq.
1095 Avenue of the Americas, New York, NY 10036.

FOR AT&T CORPORATION:

Robert D. Mulvee, Senior Attorney, 32 Avenue of the
Americas, New York, NY 10036.

Palmer & Dodge (by Jeffrey F. Jones, Esq.), One Beacon
Street, Boston, MA 02108.

FOR FAIRPOINT COMMUNICATIONS SOLUTIONS CORP.:

Huber, Lawrence and Abell (by Eric Nelsen, Esq. and
Frank Miller, Esq.), 605 Third Avenue,
New York, NY 10158.

FOR COVAD COMMUNICATIONS COMPANY:

Jason Oxman, Esq. and Antony Petrilla, Esq., Hamilton
Square, 600 14th Street, NW, Washington, DC 20005.

FOR RHYTHMS LINKS, INC.:

Blumenfeld & Cohen (by, Michael D. McNeely, Esq.),
1625 Massachusetts Avenue, NW, Washington, DC 20036.

Roland, Fogel, Koblenz & Petroccione, LLP (by Keith J.
Roland, Esq.), One Columbia Place, Albany, NY 12207.

FOR WORLDCOM, INC.:

Curtis L. Groves, Esq., 200 Park Avenue, New York,
NY 10166.

Blumenfeld & Cohen (by Gary M. Cohen, Esq.),
1625 Massachusetts Avenue, NW, Washington, DC 20036.

FOR DEPARTMENT OF DEFENSE/FEDERAL EXECUTIVE AGENCIES:

Robert A. Ganton, Esq., 901 N. Stuart Street, Suite 713
Arlington, VA 22203.

APPEARANCES

FOR CABLEVISION LIGHTPATH, INC.:

Mintz, Levin, Cohn, Ferris, Glovsky & Popeo, P.C.,
(by Michael N. Pryor, Esq.), 701 Pennsylvania Avenue,
NW, Washington, DC 20004.

FOR THE CABLE TELEVISION AND TELECOMMUNICATIONS OF NEW YORK,
INC.:

John F. Black, Counsel, 80 State Street, 10th Floor,
Albany, NY 12207.

Cole, Rawid & Braverman, LLP (by Maria Browne, Esq.),
1919 Pennsylvania Avenue, Suite 200, Washington,
DC 20006-3458.

FOR Z-TEL COMMUNICATIONS, INC.:

Lawler, Metzger & Milkman, LL. (by Michael B.
Hazzard, Esq.), 1909 Pennsylvania Avenue, NW,
Suite 820, Washington, DC 20006.

FOR CLEC COALITION:

Kelley, Drye & Warren LLP. (by Edward C.
Yorkgitis, Esq.), 1200 19th Street, NW,
Suite 500, Washington, DC 20036.

FOR CLEC ALLIANCE:

Swidler & Berlin (by Kevin M. Hawley, Esq.),
3000 K Street, NW., Suite 300, Washington, DC 20007.

Mintues-of-Use Calculation (See Footnote 71 of the Order)

Z-Tel, in Equation 2 of Attachment A, of its Reply Brief on Exceptions, characterizes Verizon's traffic-sensitive switching cost (TSSC) estimate as

$$TSSC = \frac{COST}{BDMOU \times 251}$$

However, it would be helpful to re-characterize the left-hand side of the equation as traffic sensitive switching cost per annual business day minute of use (MOU).

$$\frac{TSSC}{ANNUALBDMOU} = \frac{COST}{BDMOU \times 251}$$

Verizon, page 20 of its Brief on Exceptions, indicated that the traffic sensitive switching cost element should be applicable to all billable MOUs. The following equation summarizes the total annual billable MOUs per year [business day (BD) MOUs plus weekend/holiday day (WHD) MOUs].

$$ANNUALMOU = ANNUALBDMOU + ANNUALWHDMOU$$

where

$$ANNUALBDMOU = BDMOU \times 251$$

and

$$ANNUALWHMOU = WHDMOU \times 114$$

In order to produce a unit cost that, when applied to all billable MOUs, produces revenues equaling the total traffic-sensitive investment cost, the annual business day MOUs in the denominator of the second equation above must be multiplied by the ratio of total annual MOUs to annual business day MOUs.

$$\frac{TSSC}{ANNUALBDMOU} \times \frac{1}{\frac{ANNUALMOU}{ANNUALBDMOU}} = \frac{TSSC}{ANNUALMOU}$$

Since

$$\frac{ANNUALMOU}{ANNUALBDMOU} > 1$$

the unit cost per MOU must be lower than Verizon's methodology indicates.

$$\frac{ANNUALMOU}{ANNUALBDMOU} = \frac{(BDMOU \times 251) + (WHDMOU \times 114)}{BDMOU \times 251}$$

VERIZON NEW YORK INC.

Summary of Commission Adjustments
To Verizon's Recommended Decision Compliant Rate Filing

Note - The adjustments listed below include the revisions needed to reflect the modifications to the Recommended Decision discussed in the text of the opinion as well as correction of technical errors found during Staff's review of Verizon's Recommended Decision compliance filing. The latter are not discussed in the text of the opinion.

SWITCHING

1. Allocate 66% of end office (EO) switch material costs to non-traffic sensitive (NTS) switch UNE's and 34% to traffic sensitive (TS) switch UNE's.

INVESTMENT LOADING FACTORS

1. Reduce the denominator of the land and building factor by \$466,893,554 to reflect the subtraction of Remote Terminal equipment investment in Account 2232 (Circuit Equipment CPE) per Verizon's original (2/7/00) workpaper Part H, section 1, page 1, line 15, column d.
2. Increase the Engineer, Furnish and Install (EF&I) factor will be increased from 30% to 40%.¹

ANNUAL COST FACTORS (ACF)

1. Reduce the general productivity factors for maintenance and non-network related expenses from 3% and 12%, respectively, to 2% and 10%.
2. Adjust the Forward Looking to Current Factor (FLC) from 75% to 65%.

¹ The EF&I factors for end office and tandem switching should be calculated in the manner proposed by Verizon in its Brief on Exceptions compliance and the material prices adopted by the Commission.

VERIZON NEW YORK INC.Summary of Commission Adjustments
To Verizon's Recommended Decision Compliant Rate Filing

3. For the poles and conduit Network ACF only, reflect reversal of the Recommended Decision's 30% reduction to the Moves & Rearrangement (M) dollars.
4. Recalculate the Wholesale Marketing, Other Support and Network ACFs so that the denominators include an estimate of Splitter Investment not owned by Verizon.
5. Increase the Common Overhead ACF to reflect a \$60 million allowance for Special Pension Enhancement (SPE) payments by including that amount on Verizon's original (2/7/00) workpaper part H, section 3.11, page 4 of 5, line 4.
6. Adjust the Return, Interest and Federal Income Taxes ACF's to reflect the following cost of capital.

	<u>%</u>	<u>Cost</u>	<u>Rate of Return</u>
Debt	35%	7.3%	2.6%
Equity	65%	12.1%	7.9%
Total	<u>100%</u>		<u>10.5%</u>

7. Adjust the depreciation ACFs to reflect the depreciation lives and net salvage values in Verizon's original (2/7/00) filing.
8. Use the forward-looking cost of capital for the cost of capital input into the "support capital cost model".

LOOPS

1. Reverse the adjustments that applied the land and building loading factor to all central office equipment investment. (See Exhibit 333P [Exhibit AH-1 at 1], adjustment 5, sheets OSP-96, OSP-192, OSP-672, OSP-1344, 16CEV, 16 CEMH, 24CEV, 24 CEMH, PCH-1, PCH-2, IT-RR and IT-CPE).
2. Reflect one-half the Recommended Decision's adjustments to normalize the environmental factors used in the link cost calculator.

VERIZON NEW YORK INC.

Summary of Commission Adjustments
To Verizon's Recommended Decision Compliant Rate Filing

3. Reflect one melded loop rate for all loops based on the latest month's UNE-P (IDLC) and UNE-L (UDLC) lease quantities.
4. Reverse application of the 4:1 GR303 concentration ratio to universal interfaces and DS-1 central office terminals.
5. Reverse the 100% conduit fill factor for innerducts applied to conduit containing copper distribution cable.
6. Reduce the power investment factor input into the link cost calculator to reflect the appropriate rate (.018085).

HOUSE AND RISER CABLE

1. Decrease the fill factor from 60% to 55%.

INTEROFFICE TRANSPORT

1. Reflect the Recommended Decision's adjustment to reflect a weighted-average distance of 12 miles between wire centers (versus 33.4 miles) for Common (Shared) Transport. See workpaper part B-2, section 3, pages 1 and 2, line 3.
2. Increase the fill factor for dedicated transport from 80% to 85%.

NON RECURRING CHARGES (NRC)

1. For UNE-P ports only, reverse the Recommended Decision's adjustment to reflect a 2% fallout rate.
2. Reflect the Recommended Decision's adjustment reducing the NRC rate for "ADSL Conditioning - Manual Loop Qualification" and "ADSL Conditioning - Manual Loop Qualification Expedite" by 25%. See Verizon exhibit M, section 1, page 1 of 1.